# ARCHITECTURE IN ILLINOIS

A PUBLICATION OF THE ILLINOIS ART EDUCATION ASSOCIATION

GEORGE BARFORD and STANLEY G. WOLD, Editors

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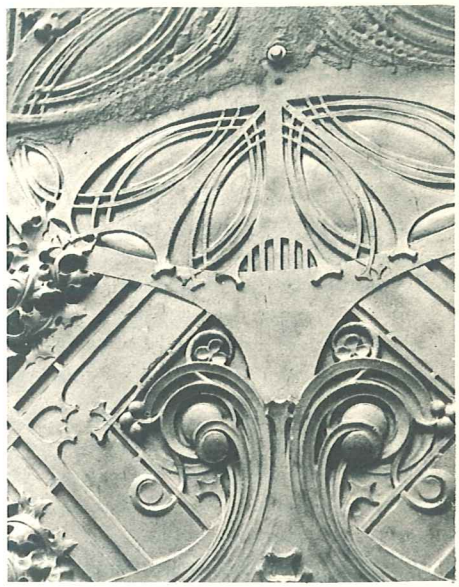

Sullivan's Ornament R. Nickel

GEORGE BARFORD AND STANLEY G. WOLD, EDITORS

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## EDITORS' PREFACE

Frank Lloyd Wright, in speaking of his early experiences in Illinois, once observed that people did not expect important new ideas to appear in the plains of the Midwest. To art teachers it often seems that times have not changed. Our students still find it surprising that things of great significance have happened and are happening in their own region. They are surprised that visitors should come from all over the world expressly to see buildings in Chicago, buildings like the Carson Pirie Scott store or Sears and Roebuck. For do they not look pretty much like any other store? The fact is that other stores look like them; other houses look like Robie House. Illinois has seen the birth of ideas which prevailed and set the quality of much of our architecture.

Producing a book of this kind is an "iceberg" task. There is a considerable underwater mass needed to rear the visible part. We thank our many authors for their generous gifts of talent and time. The response to a voluminous correspondence to search out illustrations was most rewarding, and the prompt and generous contribution of photographs from many sources is greatly appreciated. We thank Edwin Niemi, President of IAEA, for his help and encouragement, and the council for their support.

There was no shortage of subject matter for this edition of the IAEA yearbook series. On the contrary, many fine architects and their work could not be included because of space limitations. We have tried to include as many important works as possible and have enjoyed our part in producing the book.

G.B. S.G.W. Normal October, 1963

## ABOUT THE AUTHORS

Carl W. Condit is professor of English in the College of Liberal Arts, Northwestern University. More pertinent to the present instance, however, is that he is an outstanding authority on the history of architecture in Chicago since the great fire. To his 1952 book on *The Rise of the Skyscraper* he is adding *The Chicago School of Architecture*, to be published soon by the University of Chicago Press.

Walter M. Johnson's domain of activity has been architectural drawing, but he is now Professor of Art and Head, Extension in the Visual Arts in the Division of University Extension, University of Illinois. In this position, in cooperation with the University's College of Fine and Applied Arts and Krannert Art Museum, he will work to make available to schools, museums, art associations and other interested groups in Illinois instruction through classes, conferences, workshops, films, slides and circulating exhibitions.

James Marzuki teaches art at Rich Township High School, East Campus, Park Forest. In pursuit of his interest in house design, he spent the summer of 1962 traveling through Illinois, Iowa, Wisconsin and Michigan to locate, study and photograph historic and interesting houses. A grant from the Board of Education supported the study, and the results of his work enrich the school's art program.

Stanley G. Wold is a member of the Art Faculty at Illinois State University at Normal. His interests and teaching activities are moving toward psychological, philosophical and research topics, but this drift is frequently interrupted by a continuing and lively interest in architecture and planning and in the problems of art education in general. He is following the latter interest by coediting the forthcoming yearbook on art education of the National Society for the Study of Education.

Marya Lilien is Professor of Interior Design and Architecture on the staff of the School of the Art Institute, Chicago. She has spent some time studying with Frank Lloyd Wright and was awarded an Honorary Taliesin Fellowship. She has just returned from a study tour of Europe, in fact her article on Wright was completed and mailed this summer from The Hague, Holland.

George Danforth is Director of the Department of Architecture and City Planning at the Illinois Institute of Technology in Chicago. He is also a consultant on architecture for several eastern universities and is a practicing architect in his own right, with offices on Michigan Avenue in Chicago. He was closely associated with Mies van der Rohe for many years, and was chosen to succeed Mies as Director of Architecture at IIT.

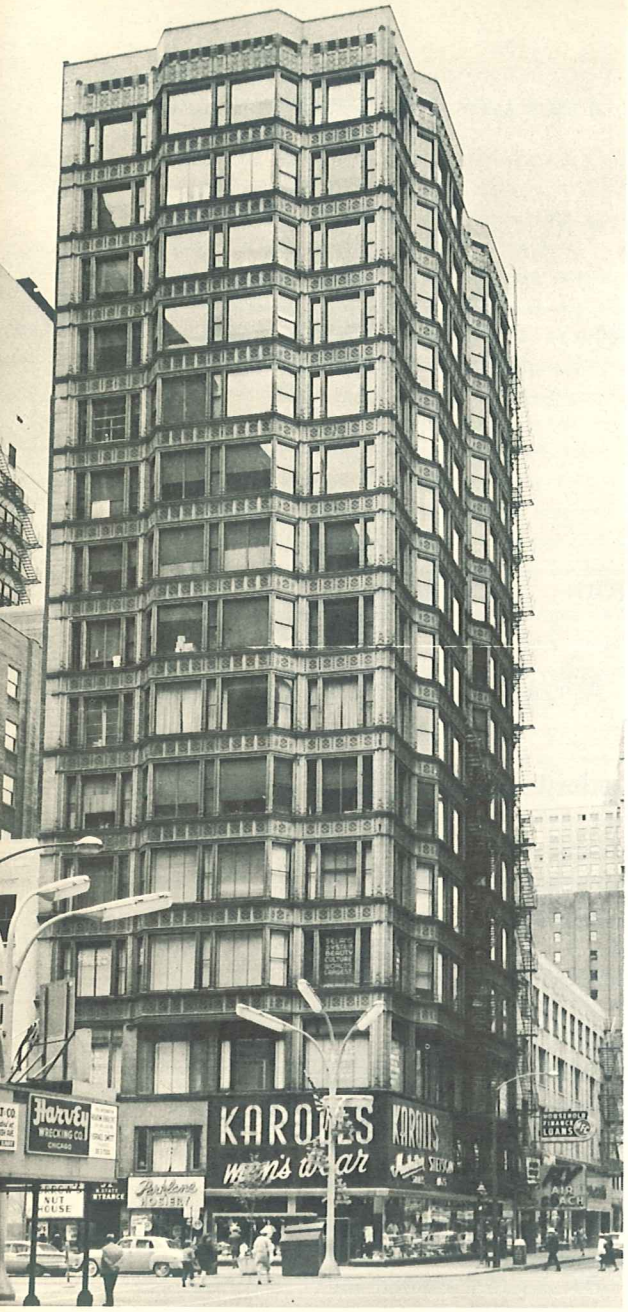
John McHale is Research Associate for the World Resources Inventory of Southern Illinois University, and has worked with R. Buckminster Fuller for many years. He is author of the outstanding book on Fuller published by George Braziller of New York. Almost the entire July, 1961 issue of the British magazine *Architectural Design* was devoted to Mr. McHale's writings about Fuller, as a special feature to coincide with the International Union of Architects Congress at South Bank, London.

George Barford is a member of the Art Faculty of Illinois State University at Normal. He teaches, among other classes, a graduate course in the history of contemporary architecture, and is at present preparing a color film on the buildings of Frank Lloyd Wright. His special interest in the past several years has been in writing and photography related to art. In 1961 he produced two films on design for the International Film Bureau of Chicago.

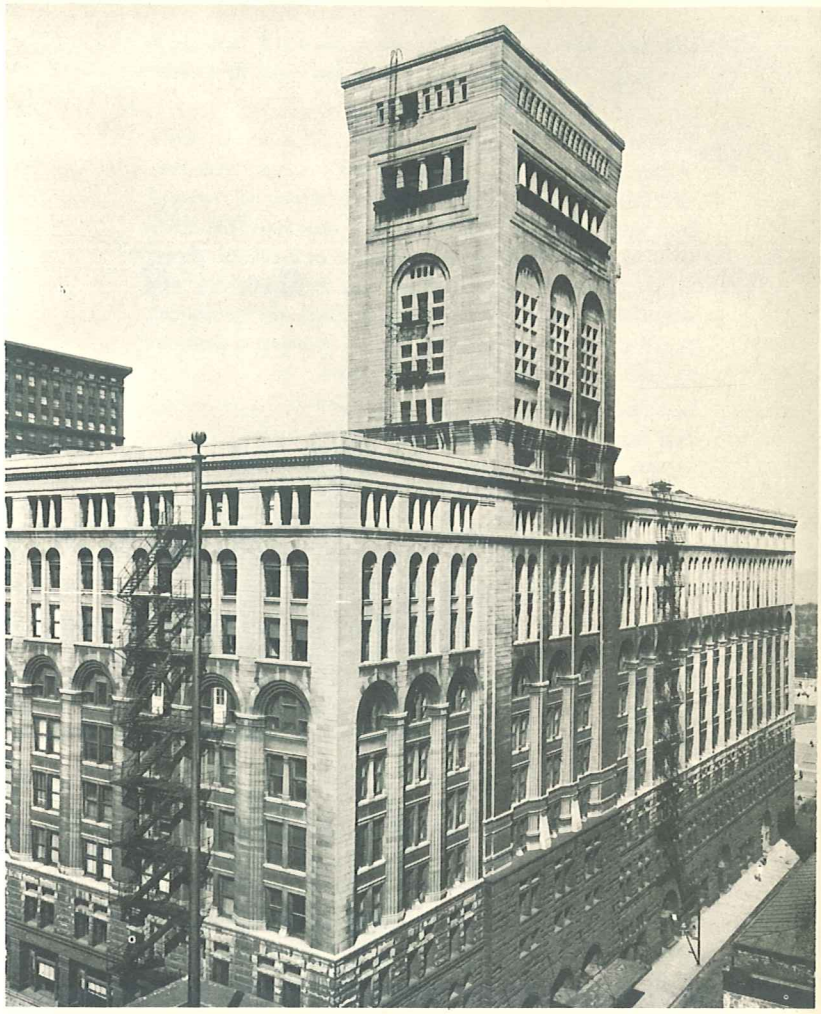
A. Richard Williams is in charge of Graduate Design in the School of Architecture at the University of Illinois, and is at present concentrating his teaching in the field of urban development and planning. He is also a practicing architect with many fine buildings executed. With his M.A. in Architecture he was awarded the Edward Langley Traveling Fellowship from the Massachusetts Institute of Technology, which took him all over Europe and much of North Africa. He leaves in February of next year for Japan, Bangkok, India, and Rome, where he will be Visiting Professor of Architecture at the American Academy.

# C O N T E N T S

Courtesy of Roosevelt University

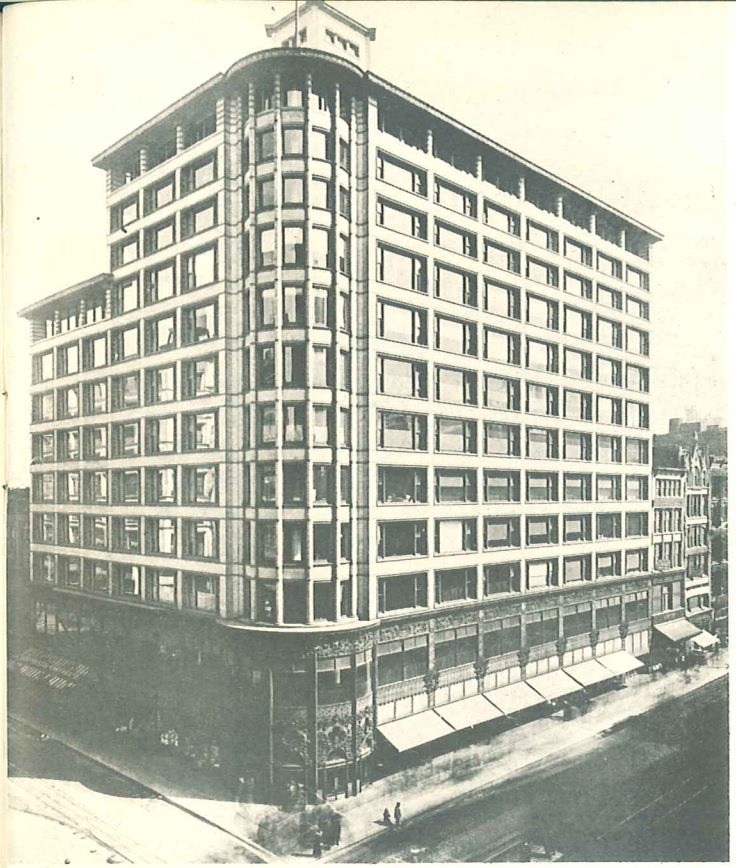



Richard Nickel



Above: Auditorium Building (1887-89) by Adler and Sullivan
Left: Reliance Building (1890-1895) by D. H. Burnham and Company
Below: Second Leiter Building (1889-90) by William Le Baron Jenney, now Sears Roebuck and Company

Courtesy of Sears Roebuck and Company



Richard Nickel

Courtesy of Aldis and Company, Inc.

Above: Old photograph of the Carson Pirie Scott Store (1899-1906) by Louis Sullivan

Right: Marquette Building (1894) by Holabird and Roche

Below: Detail of facade of the Carson Pirie Scott Store

Richard Nickel

# ARCHITECTURE OF THE CHICAGO SCHOOL

*By Carl W. Condit*

The architects who flourished in Chicago from 1880 to the first World War created not only the fundamental forms and techniques of contemporary architecture, but also a genuine style that stands as an independent body of work valuable in its own right. The achievement of the Chicago school was in great measure derived from vernacular industrial building developed primarily in England and France during the first half of the 19th century. The use of interior iron columns and beams with external masonry bearing walls had become common in English mills in the early years of the century. Successive improvements in iron framing in Europe and America brought the new technique to the point where it could challenge the long dominance of the masonry structure. The potential means of fireproof skyscraper construction were thus available by the time of the Chicago fire in 1871. The creation of the modern office and apartment block, with its curtain walls and steel or concrete frame, could come about whenever the need required it and the imagination existed to call it into being. It is precisely this combination that Chicago provided in the decade following the fire.

There were two streams in the Chicago movement. Both grew organically out of a functional approach to the design of the tall building but differed in the formal treatment of the elevations. The dominant mode in the early phase was highly empirical, expressing the underlying structure of the building in its outer form. The primary aim was to find the simplest form that would allow for the maximum admission of light and the most efficient use of interior space. The leading designers in this strictly utilitarian program were William Le Baron Jenney and Holabird and Roche. The other stream was characterized by a plastic and even subjective approach, in which the architect sought to give expression to the sense of movement or power in the big urban building. Sullivan was the dominant figure here, and he came to be extremely influential among the younger group of architects who worked in the early 20th century and created the rich ornamental vocabulary of the late Chicago school.

Jenney was clearly the first to see the potentiality inherent in the internal frame of cast iron columns and wrought iron beams. He took the decisive step in the office building erected for the Home Insurance Company in 1884-85. Generally regarded as the prototype of the American skyscraper, the 11-story Home Insurance was the first building in which steel was used as part of the internal skeleton. The presence of a brick bearing wall shared with an adjacent neighbor, the absence of wind bracing, and the heavy traditional ornament prevented the Home Insurance Building from being a fully developed curtain-wall skyscraper, but the great area of glass in the street elevations pointed to the open and transparent forms of contemporary building.

The Home Insurance Building was demolished in 1931, but all of Jenney's subsequent achievements survive. The first structure in which he freed himself from traditional masonry details and developed a form expressing the steel frame is the main department store of Sears, Roebuck and Company, formerly known as the second Leiter Building (1890-91). The Manhattan Building, constructed at the same time, represents an extraordinary attempt to secure the maximum admission of light by opening the two street elevations into glass-filled projecting bays of triangular and trapezoidal outline. The flat curtain wall of rectangular cells defining the steel columns and beams of the frame appears with greatest clarity in the Ludington Building (1891).

Daniel Burnham and John Wellborn Root formed their partnership in 1873 and began important commerical work in 1881. Root was second only to Sullivan in creative power and was a vigorous spokesman for a new organic architecture as opposed to the copying of historical styles. Among his early buildings, The Rookery (1885-86) is the most impressive. The walls of the interior light court are carried on an iron frame expressed in the rectangular composition of paired windows, flat brick panels, and narrow horizontal bands of terra cotta ornament. The court is roofed by a glass and iron dome that is a brilliant exhibition of structural and decorative virtuosity. The Monadnock Building (1889-91) is Root's triumph and a landmark in the history of the modern movement. Although the structural system is the older combination of masonry bearing wall and inner framework of iron, the formal treatment represents the first complete break with all stylistic elements of the past. Root's genius transformed this severe and rigid block into a masterpiece of geometric form.

Root died in 1891, but his legacy survived in a number of designs that came from Burnham's office. Of these the Reliance Building (1894-95) is a classic

of the Chicago movement. The curtain walls clothing the steel frame are little more than an envelope of glass disposed in broad ribbons stretched between narrow ornamental bands of terra cotta. In the Reliance the last vestige of an external bearing element has disappeared. The building anticipates the prisms of glass that Mies van der Rohe created for his lakefront apartment towers in Chicago.

Holabird and Roche were the most prolific architects of the Chicago school. They developed a generalized form that was applicable with minor variations to all the requirements of the office block. The curtain walls of their buildings are distinguished by a pattern of great rectangular cells duplicating the neutral cage of steel that carries the floor, roof, and wind loads. Within the narrow limits of structural expression they were able to introduce a surprising range of details that transformed a rigid functionalism into an architecture of power and movement. The knife-edged piers of the McClurg Building (1899-1900), the projecting bays of the Chicago Building (1904), and the clustered shafts of the Brooks Building (1909-10) are devices that impart a strong sense of upward motion to the main elevations. The broad "Chicago" windows and the deep reveals of the Marquette Building (1893-94) and the Mandel Brothers Store (1900, 1905) make these rectangular compositions vigorously expressive of the strength and durability of steel construction.

The restless imagination of Louis Sullivan produced not only the greatest range of forms but also the richest and most subtle ornament of the Chicago architects. His writings as well as his buildings indicate that he was not satisfied with strictly empirical and functional solutions. Deeply imbued with the naturalism of his age, strongly moved by the new structural technology, forced to give voice to his intense personal feelings, he belongs to the Romantic tradition of Walt Whitman and to the new spirit of self-assertion represented by Friedrich Nietzsche.

Sullivan formed a partnership with the engineer Dankmar Adler in 1881. For five years he experimented with a variety of formal and decorative schemes, searching for the means to express his subjective response to the building art. The huge Auditorium Building (1887-89), with its complex structure and interior divisions, provided the discipline he needed. The design reveals the influence of Henry Hobson Richardson, who had shown in the Marshall Field Wholesale Store (1885-87) how the masonry walls of a big commercial building could be treated with the utmost simplicity combined with dignity and power. The Auditorium embraced a 4,000-seat theater, a hotel, and an office block. This complex of interior elements is enclosed in uniform masonry walls divided into broad piers joined by arcades. Above the massive granite base the piers give the walls an open and dynamic rhythm.

Adler and Sullivan turned to steel-skeleton construction in a series of epoch-making buildings that gave the skyscraper its mature form. In the Wainwright Building in St. Louis (1890-91), the Schiller, or Garrick Theater, in Chicago (1891-92), and the Guaranty in Buffalo (1894-95), Sullivan treated the curtain wall as a plastic screen in the form of a close pattern of vertical bands with a strong upward thrust. His purpose was to intensify the sense of height until the building became, as he called it, "a proud and soaring thing." The Wainwright and the Guaranty survive, but Chicago could not save the Garrick Theater.

Sullivan's latest works in Chicago—all of them standing now—are so different from the skyscrapers that they seem to have been done by another architect. The Stock Exchange Building (1893-94) is neither vertical nor horizontal in emphasis. The walls are neutral planes of glass and terra cotta drawn over the projecting bay windows and the flat areas between them. The Carson Pirie Scott Store (1899, 1903-04, 1906) is the ultimate triumph of structural expressiveness in American commercial architecture. Above the flat screen of the base, with its lavish foliate ornament, rise the great cellular elevations, bold and exact and perfectly proportioned articulations of the iron and steel frame. The deep window reveals enhance the strength and incisiveness of these elevations, while the narrow ornamental bands along the sill and lintel lines give the walls a subdued horizontal movement.

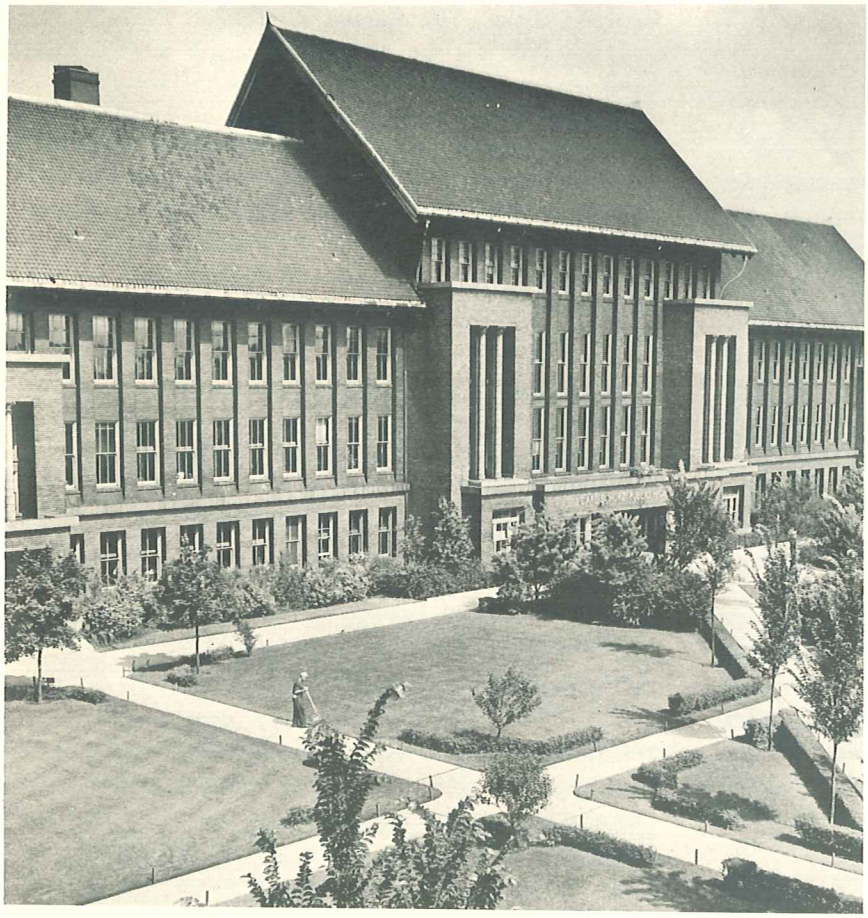
The Chicago school in the 20th century reflects the influence of Sullivan's plastic and ornamental approach. The second generation was strongly drawn to the long horizontal line, or to sweeping horizontal planes, and for this reason is sometimes known as the Prairie school. The architects were prolific in residential designs, a field in which Frank Lloyd Wright was the dominant figure. Others of the group were George Maher, Walter B. Griffin and his wife, Marian Mahony, George Grant Elmslie, John S. Van Bergen, and Thomas E. Tallmadge.

Among the architects of commercial and public buildings, the firm of Schmidt, Garden and Martin enjoyed the greatest number of commissions. Richard Schmidt was a pioneer in the use of reinforced concrete framing, and his office designed the largest structure of this kind in the Montgomery Ward Warehouse (1906-08). George Grant Elmslie, Sullivan's designing assistant for 16 years, worked in the plastic

and ornamental idiom of Wright and the late Sullivan. Elmslie and his partners, Purcell and Feick, produced a minor classic of the Chicago school in the Edison Store (1912).

Having created the modern office and apartment building, Chicago architects in the 20th century turned to public and ecclesiastical buildings. The designs of Dwight H. Perkins for Chicago public schools represent the first application of a native and modern architectural style to the school building. The largest of Perkins's commissions is Carl Schurz High School (1908-10), which shows the influence of Sullivan and Wright. The elevations are developed into a close vertical pattern of window groups and narrow piers, but this is dominated by the strong horizontal lines of the roof, the stone caps of the decorative pylons, and the stone course at the top of the first story. These motifs are common in Wright's early houses.

The fundamental elements of construction, planning, and form in the contemporary architecture of steel and concrete framing were developed in Chicago between 1880 and 1910. To this achievement must be added the creation of the first comprehensive metropolitan plan for the American city, prepared by Daniel Burnham and Edward H. Bennett in 1909 and accepted as the official Chicago Plan in 1910. The architects and planners of the city thus established at the turn of the century standards of building and civic art which are now accepted throughout the world.



Courtesy of Chicago Public Schools

Carl Schurz High School (1910) by Dwight H. Perkins

# FRANK LLOYD WRIGHT IN ILLINOIS

*By Marya Lilien*

In October 1957 an exhibition of work by architect Frank Lloyd Wright opened at the Sherman Hotel in Chicago. Great festivities accompanied this event. A testimonial dinner was attended by hundreds of Chicagoans, and the Mayor officially proclaimed October 26th as "Frank Lloyd Wright Day." The master himself was joyously greeted wherever he turned; interviewers accosted him with most unexpected questions, to all of which he was ready with a witty and unexpected answer, smiling with a mischievous but warm sparkle in his eyes and moving around with youthful, agile grace. It was a happy occasion. The City, of all cities the one he was most attached to, was at last paying tribute to its great son, who at eighty-eight could look back on a life inconceivably fruiful in creative achievement.

But looking back never satisfied Mr. Wright. Here, among the models and pictures of his completed work, he brought to Chicago a new thought for the future: the "Mile-High Building." A huge rendering of this project was unrolled, and the architect presented to his amazed audience a structure of five hundred and twenty-eight stories soaring saber-like toward the sky. Named "The Illinois" by its creator, it was designed especially for the Chicago lake-front. Five times taller than the tallest skyscraper in existence, it would replace many blocks of present day commercial buildings so that it could stand free among stretches of green land and cast its own shadow on the ground. This would change the whole aspect of the city of the future. One or several "Mile-Highs," each surrounded by parks, would replace the congested streets of the business district. For a building of such height Wright devised a unique foundation. Like a tree anchored on its tap-root, this structure rises from, not one, but three tap-roots, the tripod creating a maximum of stability. This was far too advanced for his audience, but in his long history of architectural pioneering, Frank Lloyd Wright had learned not to expect immediate acceptance.

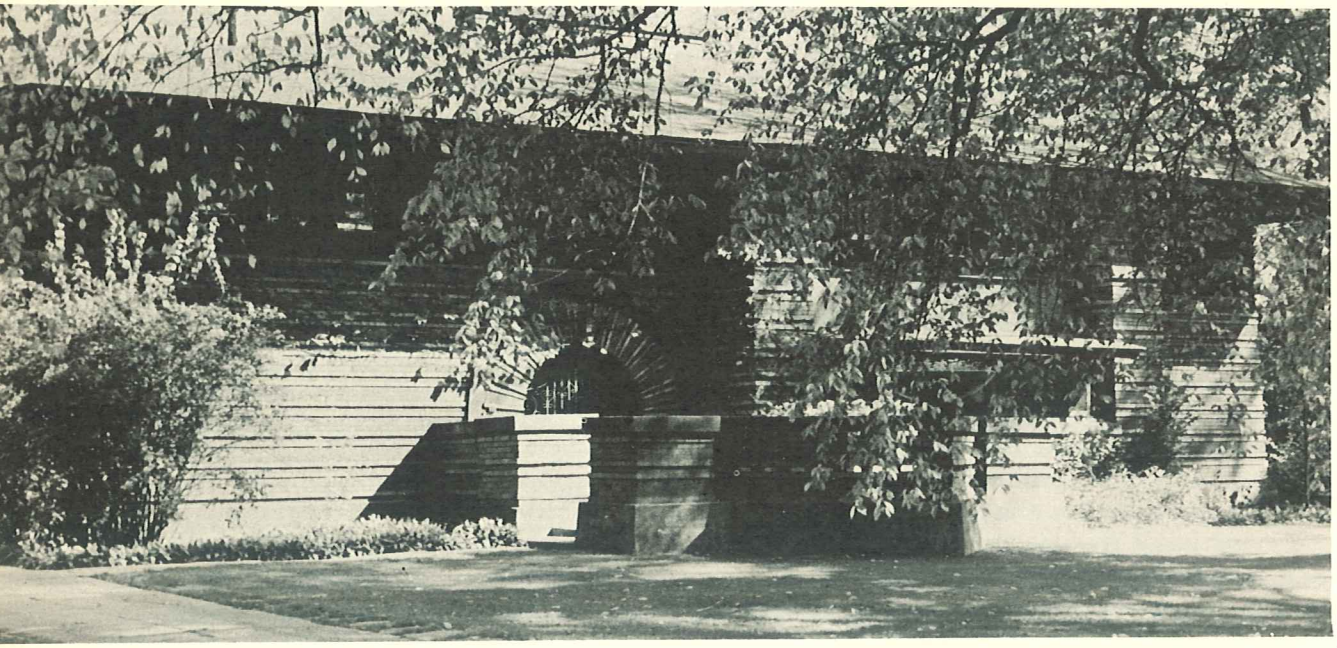
A situation of some twenty years before came to my mind. On my first visit to Taliesen, his home near Spring Green, Wisconsin, Mr. Wright showed me his gallery of architecture and explained the principle of Broadacre City on the beautiful, newly-built model. Considered an eccentric radical, he had but few commissions at that time. With only the warm cooperation of his wife, Olgivanna, he organized the "Taliesen Fellowship," creating a center of education and living culture. While struggling to keep his beloved Taliesen, the loss of which was threatened when the depression stopped all building, he turned to creating a gigantic plan for the future of the entire Country. Broadacre City meant decentralization to allow all people to re-trace their contact with nature and elevate their way of living through organic integration of architecture and environment. Mr. Wright said, "It seems Utopian at present, and I don't expect it to be understood right now. But maybe in fifty or maybe in two hundred years this idea will become a reality." Scattered among the four square miles embraced by the scheme, among the small and large homes, factory areas and cultural centers, stood lonely skyscrapers.

The beginnings of Frank Lloyd Wright's work lie in Chicago. Arriving in 1889, a young rebel to superficial academic forms falsely superimposed on structure, he searches for truth and integrity in architecture. The fortunate encounter and collaboration with Louis Sullivan, the "Lieber Meister," confirms doubts and clarifies his aims. There came his marriage and the building of his own home and studio in Oak Park. There, on his own but while still with Adler and Sullivan, he designs the Charnley House on Chicago's Astor Street, aware for the first time of the decorativeness of plain flat walls. Toward the end of 1893 an office in Sullivan's new Schiller Building (later the Garrick Theater Building) is outfitted with novel clear-glass doors on which a gold-letter sign announces "Frank Lloyd Wright, Architect." (The motto, "Truth Against the World," was not written out on the door.) The young architect's excitement is surpassed only by pangs of disbelief: will a client come? Here enters Mr. William H. Winslow. Knowing Wright from Sullivan's office, he asks him to design a home in River Forest: the all-important first client. The Winslow House blossomed out with direct, plain brick walls surmounted by a Sullivanesque ornamental terra cotta frieze uniting the upper windows. It became an attraction but was also ridiculed in an era when, in Wright's words, "the popular fetish was the murderous corner tower serving as bay window in the principal room."

Young Wright's supreme talent was noticed by the Chicago city planner, Daniel H. Burnham, who presented to him an alluring offer. He would send Wright to Paris and Rome for three years of study at the

Winslow House (1893)

Photos: George Barford



Huertley House (1902)

Robie House (1908)

Beaux Arts. To "Uncle Dan," the Columbian Exhibition of 1893 showed the future of architecture tending to the elegance of the Classic Style. He offered Wright the opportunity for a thorough training therein, an assurance of a successful future practice. What strength of convictions did it take for a young beginner to flatly refuse such an offer! He believed in architecture as the main factor in the cultural growth of a nation. *Style* was what he was seeking, not fashion, which he saw as "parading in other people's finery." He would not betray the cause.

Many houses followed, commissioned by individuals with far vision. At first Sullivan's idiom was still visible; then Wright's own individuality and creative principles crystalized in the concept of the Prairie House. Chicago and its suburbs, as well as many other towns in Illinois, are proud sites of these early gems. They stand out as noble landmarks among their contemporaries of pseudo-Georgian, pseudo-Castle on the Rhine or Pseudo-Whatever styles.

The Robie House and the Coonley House are probably the best known examples of the poetic prairie houses, which were trail-blazers to modern thought in residential buildings. Their features have become common slogans among builders and home owners, although they are often debased and deprived of their original sense of beauty. To name but a few: the "open plan," doing away with cubicles and allowing space to flow into space; cantilever construction; planters incorporated in the structure and bringing the inside out and the outside in; natural materials inside as well as outside; generous eaves and overhangs shading glass walls in summer but allowing solar heat to penetrate in winter; and beyond all, integration of architecture with surrounding terrain.

In those early years in Chicago two public buildings were erected in which Wright took pride: the Unity Temple in Oak Park and the Midway Gardens. The Unitarian Temple (1906), the first concrete monolith, is a noble room for worship which one enters from an atrium separating it from the section devoted to secular church functions. The continuous glass strip under the horizontal roof slab, organically integrated lighting and lovely structural decoration delight today's visitors by their freshness but probably astounded those of fifty years ago. Midway Gardens (1913) was a restaurant which grew, in Wright's magic hands, to be a splendid environment for gracious amusement and dining. Indoor dining rooms and open-air dining terraces, an orchestra shell and an outdoor cabaret were all poetically tied together with planters and flower urns and surmounted by airy pinnacles and fountain-like sculptural abstractions in concrete. The architect designed everything: furniture, murals, sculpture, china, linens and stained-glass windows. Not only the architecture, but also the abstract murals and sculpture were an inspiration to European artists. Doomed by unfortunate circumstances, the buildings were torn down ten years later.

There were people who admired the revolutionary ideas of the young genius. Among them, Jane Addams was always encouraging. An understanding news article on his lecture, "Crafts and Arts of the Machine," was written, he suspected, by this great woman. In 1911 a book on Wright's buildings in Illinois was published in Germany, and a leading German architect was so impressed with Unity Temple that he brought back to Europe the message, "A new architecture is born." He built a new home, "Taliesen," on his Welsh grandfather's homestead in Wisconsin. The design studio was there, although he maintained his office at 333 North Michigan Avenue, Chicago. The Illinois prairie houses and the Midway Gardens so appealed to the Japanese that he was invited to build the Imperial Hotel in Tokyo. The concrete block houses in California followed. His fame in foreign countries grew, but no large public commissions were given him at home.

Although many projects have remained as drawings only, Wright's Illinois buildings have had a tremendous impact on architectural thought throughout the world. He submitted three alternative plans for the Chicago World Fair of 1933: a sixty story skyscraper on the shore of Lake Michigan, floating islands in the lake connected by bridges, and a giant tent covering forty acres of the lake shore. Since the founding of the Taliesen Fellowship, scale models were made of many of Wright's projects. In 1932 the Sears Roebuck downtown store opened with an exhibition of models and drawings. Carson Pirie Scott store presented his work in 1935. Exhibits of his work have traveled all over the world to museums and universities, although Chicago has never given him a museum showing. Meanwhile, a younger generation was eager to hear his message. His many lectures included appearances in North Shore Schools and in Mandel Hall. Around 1950 he was to speak at the Art Institute of Chicago. But when thousands of young people stormed for admission, the lecture was moved across the street to Orchestra Hall which immediately filled to capacity. The prophet was recognized in his own town.

The impact of Wright's principles on the future of architecture and on the American way of life cannot yet be fully appraised. He visualized his whole Country becoming a total harmonious environment. His projects on a great scale, such as Broadacre City,

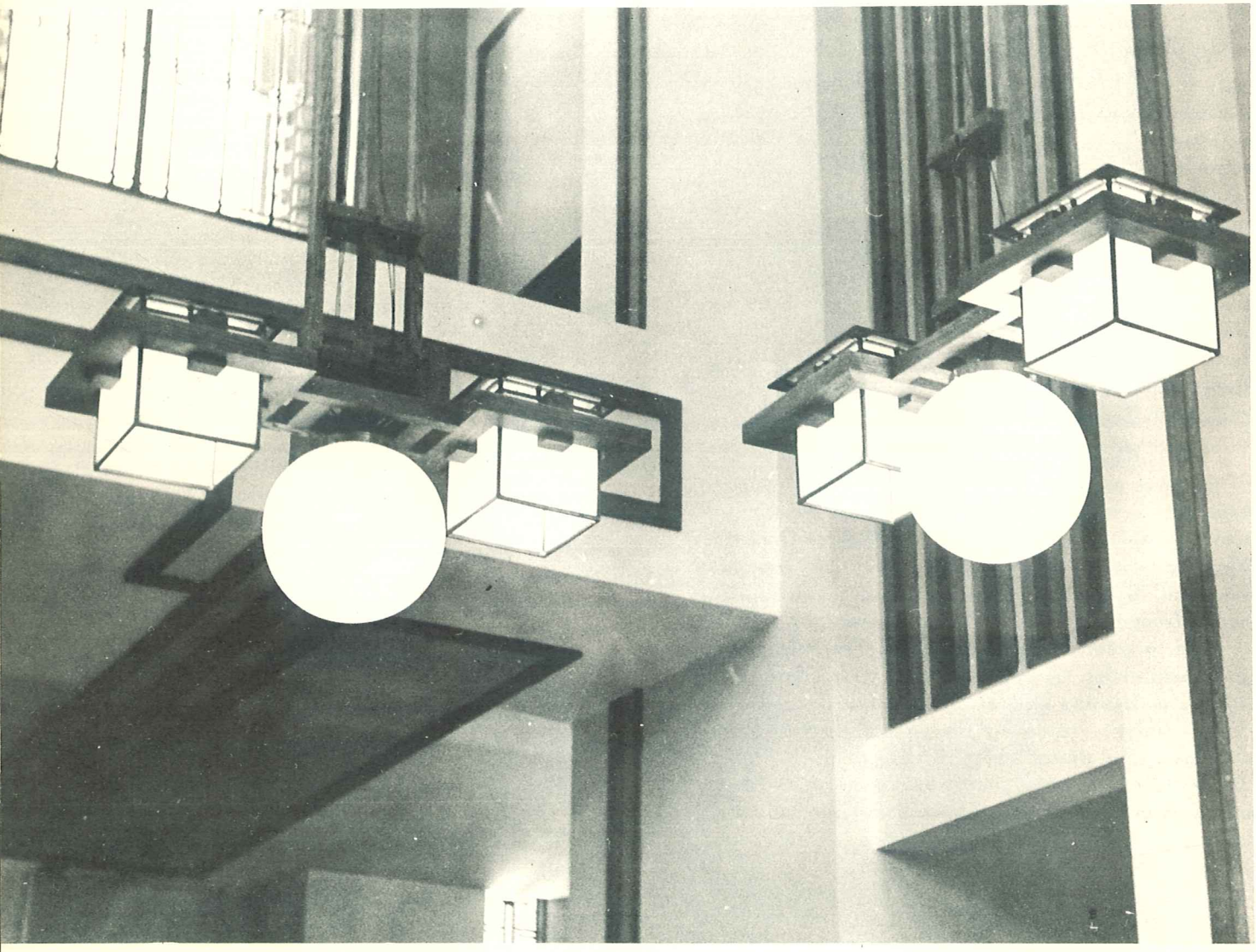
Pittsburgh's Golden Triangle, Madison's Monona Terrace, and the Illinois "Mile-High," were to be steps toward this goal. Having remained "in manuscript" so far, they nevertheless are most vigorously stimulating the thought of present and future planners. Through all the disappointing rejections, Mr. Wright kept an undaunted spirit. He learned never to count on immediate acceptance and converted potential bitterness into delightful humor. Recently, at the dedication ceremonies for one of his buildings, while cheered and congratulated, he leaned over to Mrs. Wright and whispered, "I am afraid I must be slipping; everybody likes this building."

Chicago and Northern Illinois remains a Mecca with the largest concentration of Frank Lloyd Wright's early work. It is to be hoped that these treasures will be maintained and cherished.

ACKNOWLEDGMENT

My thanks to John Howe of Taliesen Associated Architects for his valuable factual information as well as for confirmation of my reminiscences.

M. L.



**Detail, interior of Unity Temple** **Photo: George Barford**

# MIES VAN DER ROHE 1886-

*By George Danforth*

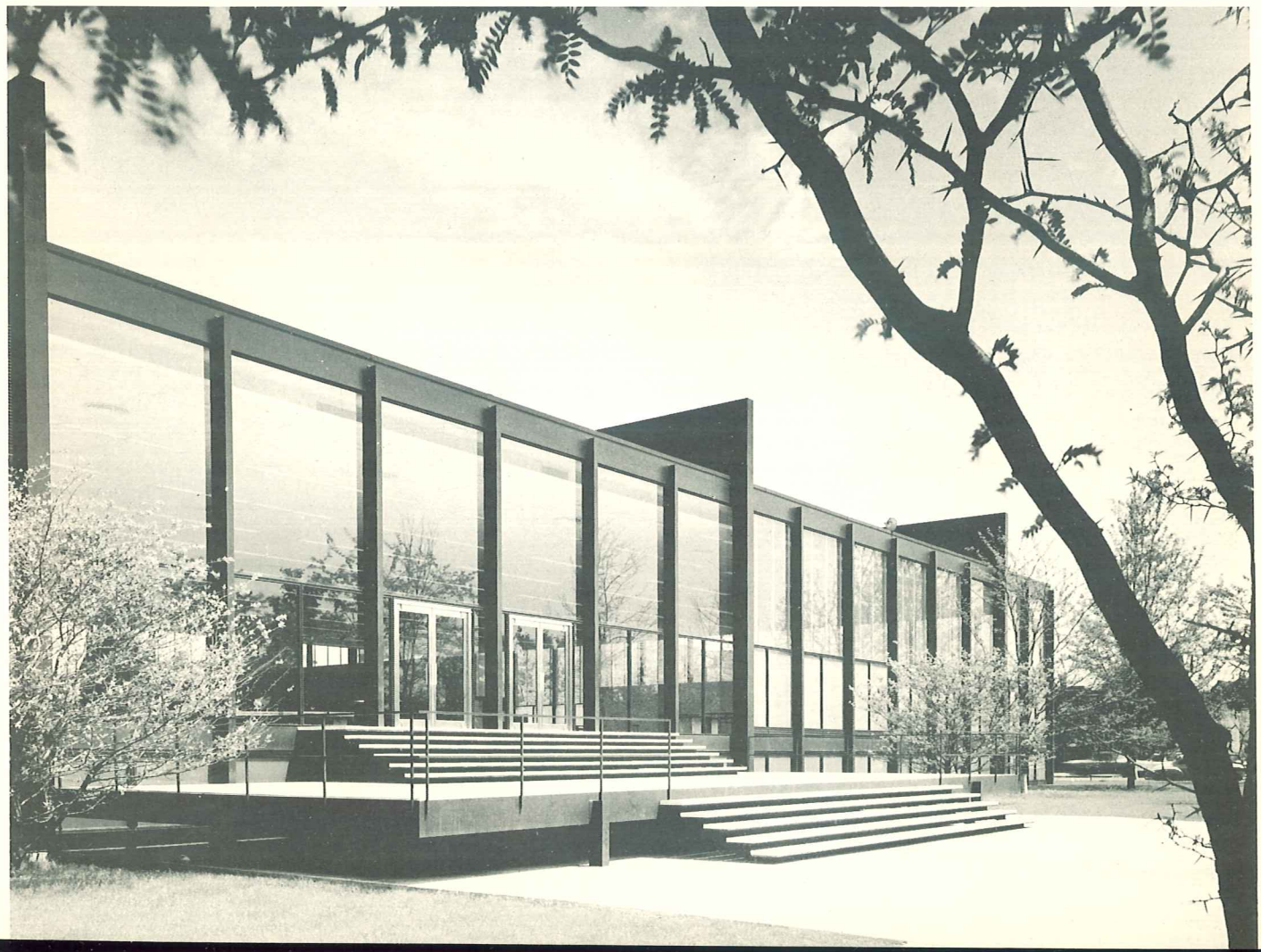
Even before coming to America from Germany in 1938 Mies van der Rohe was renowned as an architect and educator through his prophetic projects of the 1920's, his completed work of the 20's and 30's and as last Director of the Bauhaus in Dessau and Berlin, Germany.

As one of the significant pioneers of contemporary architecture Mies' philosophy focuses on seeking the very essence of the problem of architecture. In his professional work since 1938 and in his educational role as Director of the Department of Architecture at the Illinois Institute of Technology (1938-1957) he has demonstrated that strongly objective discipline which comes from his concern with the basic principles of building.

In work of such an objective character all random aesthetic speculation is rejected, resulting in an architecture as Mies has said, "rooted in the practical, extending through all degrees of value into the realm of sure art."

His American buildings are for the greater part located in Chicago, Illinois and indicate two fundamental concepts of structure, the architectural clarifications of which have been among his most important contributions: the skeleton, as manifested in the multi-storied building, and the building of the free span.

Examples of the former are found in his earlier buildings on the campus of Illinois Institute of Technology and in the numerous apartment buildings along the lake front such as 860-880, 900-910 Lake Shore Drive and the Commonwealth Apartments at Diversey and Sheridan Road. Of the free span type the most distinguished building of Mies' Chicago work—if not his entire endeavors—is Crown Hall on the IIT campus, shown below, in which the Departments of Architecture, Planning and Design are housed.



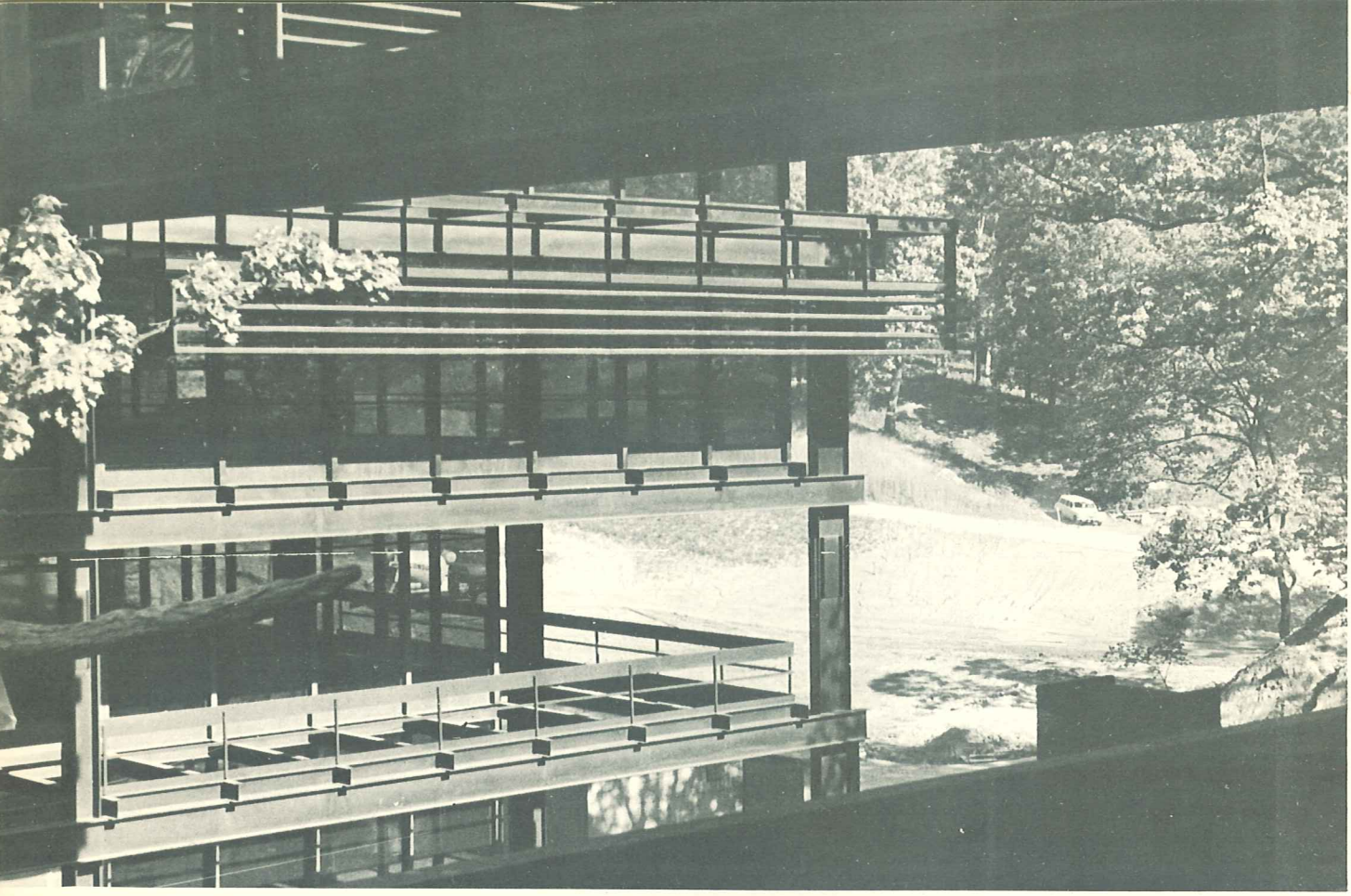
Bill Engdahl, Hedrich-Blessing

Hure Henry, Hedrich-Blessing

Mies van der Rohe: Above — 900 Esplanade Apartments, 1954

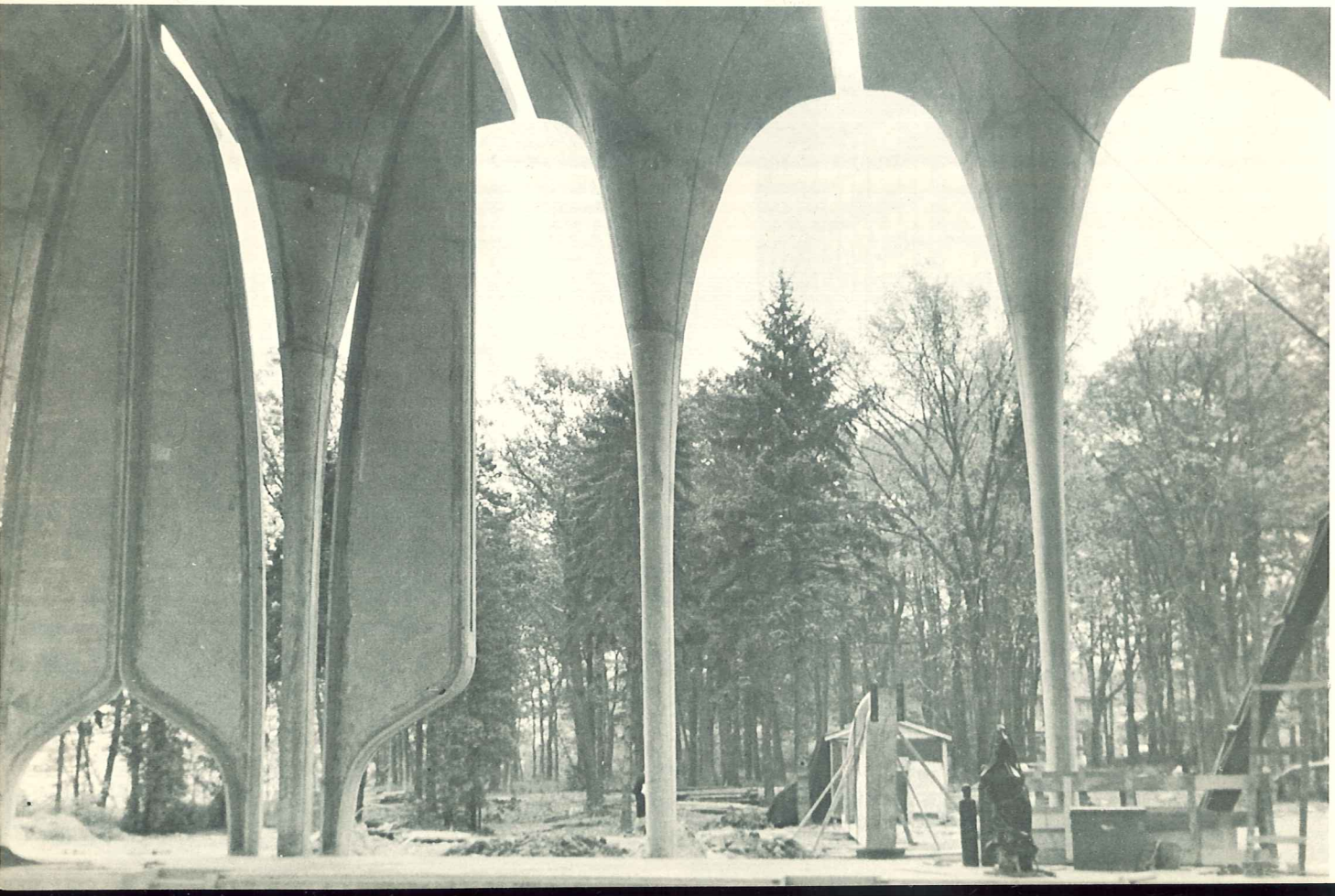
Opposite: 860-880 Lake Shore Drive Apts., 1951

Below — Metall. & Chem. Engineering Bldgs.. IIT, 1946



Under construction near Moline is the rough and rugged and permanently rusted cinnamon-brown building of the Deere Research Center, by Eero Saarinen.

In Glencoe on a bluff overlooking Lake Michigan rise the sensuous forms of this graceful synagogue, designed by Minoru Yamasaki.



# R. BUCKMINSTER FULLER

*By John McHale*

Buckminster Fuller may not be adequately described as wholly architect, engineer, inventor or mathematician. His lifetime of pioneer exploration in many fields has been directed towards what he calls "a comprehensive and anticipatory design science." In reviewing that part of his work which has impinged directly upon architecture, it is important, therefore, that we take note of this comprehensive over-view.

In 1959 Fuller became Research Professor in the Design Department of Illinois Southern University, and much of his work since has been integrated with the department's program. His structural designing is one aspect of an orientation which includes man and his universe as related within a total structural process. He defines 'universe' as, "the finite aggregate of all men's consciously apprehended and communicated experience." In seeking structural advantage for man, Fuller suggests that we employ such principles as have been found to be universally applicable, i.e. scientific laws. Therefore, in the designing of structures his rigorous emphasis has been on the organization, the "energy pattern accounting," which is congruent with nature's universal principles of structure.

We tend to observe universe at the level of its local patterning, and these local energetic aspects are "the isolated differentiated out behavior of nature." Man's study of natural structures has tended, therefore, to become specialized into separate areas concerned with specific local functions rather than with the whole process. Fuller uses the term "synergy" to refer to the fact that the behaviour of the whole is unpredicted by examination of its various isolated parts. Structural exploration must then be both energetic, as encompassing the local patterns, and "synergetic" by integration of these within the whole. Hence the geometry which underlies Fuller's structural discoveries is called "Energetic and Synergetic Geometry" and furnishes a coordinate system which accommodates all natural phenomena and their structural relations.

In relating natural structure to man-made forms, Fuller has commented that, "Nature designs trees, human beings, birds, fish and butterflies, not only to absorb unexpected stresses through their ability to adjust to forces in a subtle manner, but often to take growthful advantage of those forces by employing the inherent structural, chemical and locomotive principles." But, while emphasizing the employment of nature's own structural principles, Fuller further suggests that mere copying of natural patterning is not enough—however aesthetically satisfying this may be. True structural exploration must seek out the "generalized" principles of natural cohesion which exist—though more often at the sub-visible level. From these principles may be designed structures which, though similar to natural structures, are not found in nature. Fuller says about his discoveries, "Though superficially similar in patterning to radiolaria and fly's eyes, geodesic structuring is true invention. The radiolaria collapse when taken out of water. Fly's eyes will not provide structural precedent for man occupiable structures."

Fuller sees the prime "structural" event of our time as the completion of the table of atomic elements, giving a full basic inventory whose true functioning is invisibly located at the submolecular level. Hence his assertion that "men do not build houses with materials, they organize visible-module structures comprised of sub-visible module structures." In this view of "design" as the visible ordering of sub-visible energy events, there is no value division between natural and synthetic materials—all that we do in synthesising is to affect local rearrangements of the given set of natural energy configurations of the basic inventory.

In practice this attitude has allowed Fuller to employ a vast range of widely different materials and techniques in his work. He is not restricted to any particular material or mechanical process, like reinforced concrete or plastics or curtain walling, as the preconceived and formally preferred solution. There is no implied end "solution," only the continued flexible response to man's environmental requirements, which are in themselves a dynamic interplay of energy relationships in varying degrees of transformative change. His central allegiance remains firmly with man usable function and its evaluation in terms of performance.

In a paper of 1959 he lists the requirements of a structural system as "Capable of sustained enclosure and controlled isolation of conditions favorable to man's activities, ranging from single family dwellings to major industries housed on the moon.

"Capable of inhibiting all possible stresses and providing all positional advantage requirements.

"Capable of supporting appropriate mechanisms for valving all impinging random or periodic energies into patterns complementary to men and machines. Capable of penetrations from any directions as desired."

Many, if not all, of these required capacities may be demonstrated in Fuller's own work over the years. His most recent explorations show a progressive refinement of structural means which virtually trend towards the "invisibility" of enclosure implied in his principles.

In the present review consideration is mainly limited to the geodesic and tensegrity structures as giving a cross section of his work. Since their inception, some seventeen years ago, a huge number of these have been made. The first large scale industrial use was in the Ford Rotunda in 1953—93 ft. diameter and using only 8 and ½ tons of aluminum to enclose a space calculated to require 160 tons of steel for a conventional covering. These structures are now to be found in every part of the world, having been mostly air-delivered, and they perform in every major climatic condition. There are more than 100 industrial licencees now concerned with their manufacture, ranging from the small units of average 20 to 40 ft. diameters, in wood, aluminum, plastic, paperboard, etc.—to the largest clearspan enclosures in existence—the steel Union Tank domes.

As is implicit in Fuller's "anticipatory design" procedures, the preplanning of these structures, of their fabrication, delivery to site, erection and maintenance schedules, includes providing for every contingency—down to human fallability, lack of skilled labor, unfavorable work sites, etc. Their lightweight components are often of identical size and may be used for varying overall dimensions of structure, and are color coded for assembly. This allows complex structures to be put together by unskilled crews working under primitive conditions with unprecedented speed.

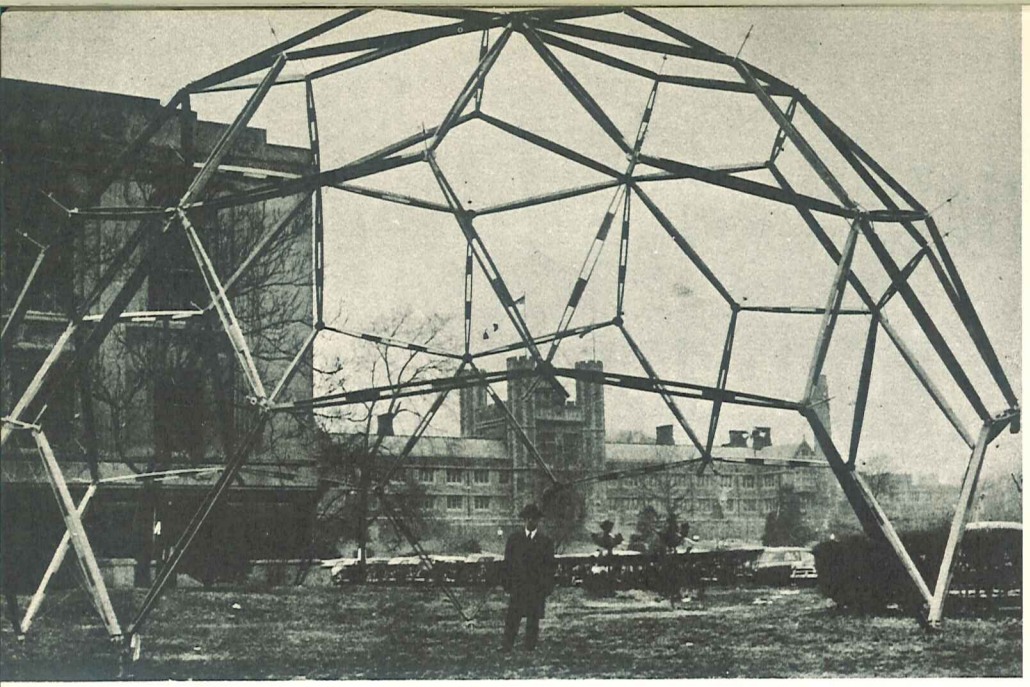
Among the early domes is a 1949, 14 ft. diameter one of the so-called "Necklace" type, which had a continuous internal cable enabling it to be folded up into a 50 lb. package. Such folding, packaging and re-assembly ideas were further elaborated in a series of "seed pod" structures, calculated to "explode" into their enclosing form on impact landing by parachute, helicopter or rocket, for use in remote locations.

Such experiments stem from Fuller's initial premise, relative to the first Dymaxion "house" of 1927, of a completely autonomous environment control as air-deliverable to any part of the earth, and fully designed to meet all eventual requirements. The Radomes of 1956, for the Arctic DEW line, were a rigorous exercise in such principles. These fiberglass domes were strong enough to function at subzero temperatures in 150 mph winds, light enough to air-deliver, simple enough to assemble in brief periods of working time and permeable to radar beams as well.

Somewhat similar demands of delivery speed and special siting requirements inaugurated the present use of geodesics on a world wide scale in U.S. overseas exhibit programs. A 100 ft. diameter pavilion, designed and fabricated in six weeks for installation at a Trade Fair in Kabul, Afghanistan, was flown there in one DC4 aircraft and erected by local labor under direction in 48 hours. Both of these domes, the Radome and Kabul, were processed by Fuller's associated offices, Geometrics and Synergetics Inc., respectively, which now operate as self-supporting organizations.

Fuller's prime personal allegiance was early and firmly committed to the development of low cost high-grade family dwelling embodying the highest living standards for all people. In this area, inadequacy has been the norm for centuries. At the present time more than one-third of the world's population is housed, or "unhoused," in conditions which doom them to early death or premature aging and disease due to lack of adequate shelter. Floods, storms and other catastrophes render thousands homeless every year, and a growing population constantly adds to the urgency of needs. One solution is a 40 ft. diameter dome of plywood sheet, called "Pinecone" from its stressed skin overlap formation. A family of such low cost domes were subsequently developed and are now produced in quantity by various industrial fabricators. Fuller himself has his home base in a wood frame type associated with this form of structure. At a seminar in the University of Natal in 1958, Fuller directed research towards a suitable dwelling to replace local overcrowded shanty town conditions among the native population. The resultant "Indhlu" (or igloo) house was made in aluminum corrugated sheet. Approximately 20 ft. diameter, it weighed 200 lbs. and was 12 ft. high at center, with a floor area of 300 sq. ft. Plastic windows included, the prototype cost approximately $100.

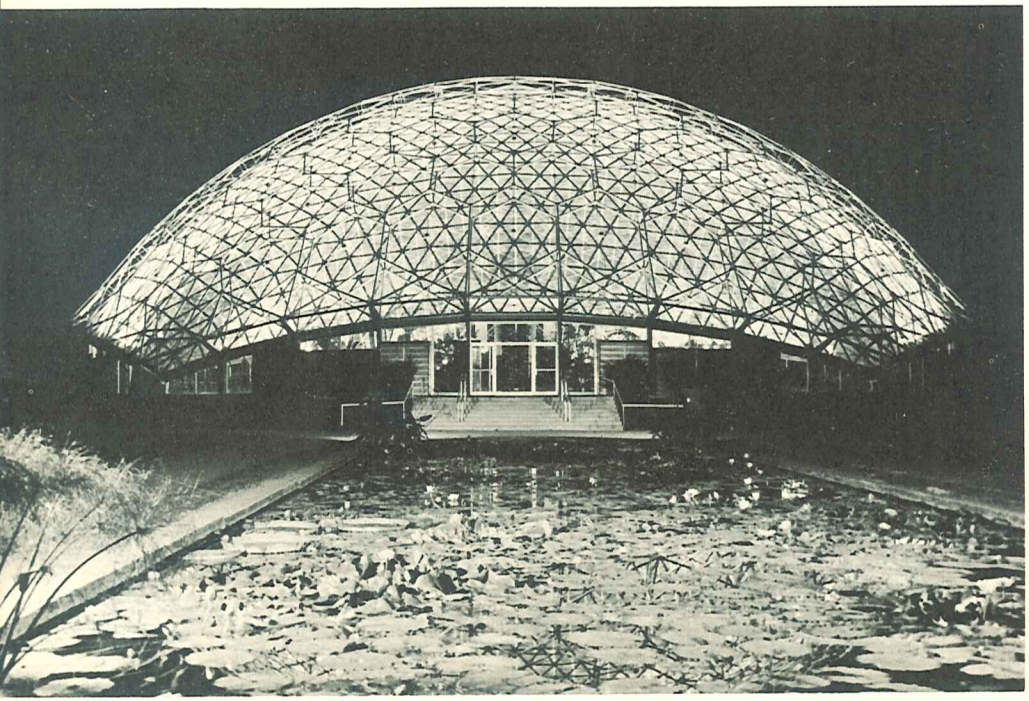
A recent development in this area is the "Geospace" paperboard dome developed by the Monsanto Chemical Co., as a low cost shelter for industrial and emergency use. This structure came into mass production in 1961, and later in that year 100 units were in use in Puerto Rico as housing for people rendered homeless by floods. Panels are machine cut from half inch thick "Fomecor" board—made of styrofoam, a



Geodesic Dome, "Necklace"

Photos Courtesy R. Buckminster Fuller

Dome for Kabul, Afghanistan, Trade Fair



St. Louis "Climatron", 1960. 175 ft. diameter, 70 ft. high


Corrugated Aluminum "Indhlu" Dome, University of Natal, Africa

nonhygroscopic plastic material, sandwiched between Kraft paper of high wet strength and structural stability. Covered with a further plastic coating, they have a long service life and excellent insulation qualities for Arctic or tropical conditions. Paperboard structures like these were first developed by Fuller in the early 1950's; one 42 ft. diameter dome won the Milan Triennale "Gran Premio" prize in 1954. Large scale manufacture was held up until paper of sufficiently high wet compression strength became available recently. The importance of this type of structure lies in the enormous productive capacity already available in paper processing and printing plants round the world. Assembly instructions, color coding and any other required matter may be printed on as part of the process. In combination with small "mechanical core" units, solar batteries etc., such paper "houses" could be a revolutionary tool in the raising of living standards in many depressed areas around the world.

Where the small individual unit may be ideally suited to deployed uses in many areas, the necessity of large scale enclosure for centralized purposes is also important. At the moment most of our cities no longer provide even marginally efficient facilities either for individual dwelling or for the centralized social and commercial functions they evolved to serve. There is inherent in Fuller's constructional principles a capacity for large clear-span enclosure. The two main examples treated here, Union Tank and the St. Louis "Climatron," are "small" pilot examples of emergent possibility.

The Union Tank Car Co.'s Domes at Wood River, Illinois, and Baton Rouge, Louisiana, are, at present, the largest-clear-span buildings in existence—384 ft. in diameter, with 2½ acres of floor space and the height of a 10 story office block (120 ft.) at center. They were built to house the regional maintenance and car repair plant of Union, and associated Garver Tank Car Co. Roughly one quarter spheres, they employ a steel hexagonal panel in an involute fold construction, forming a 4 ft. deep truss with 4 in. diameter pipe connectors and ¾ in. tension rods, which make up an outer hexagonal network. In the Wood River dome using 6 in. diameter connectors at the vertices saved 7 tons in overall weight, by reducing the number required. These panels were prefabricated and edge welded into position in construction. A total weight above foundation of 567 tons amounts to roughly 2 ozs. of structural weight for each cubic foot of enclosure—the ⅛th inch thick sheet of the enclosure is thus relatively less than eggshell thin. Both of these domes are characterized by their simple parts inventory.

In the Wood River dome, the center top section was put together first, and building was from the top down. While the completed section was raised pneumatically on a huge air inflated nylon bag, additional rows of panels were added at the ground level. Ultimately the entire shell was supported on an air pressure of 1.6 ozs. per square inch.

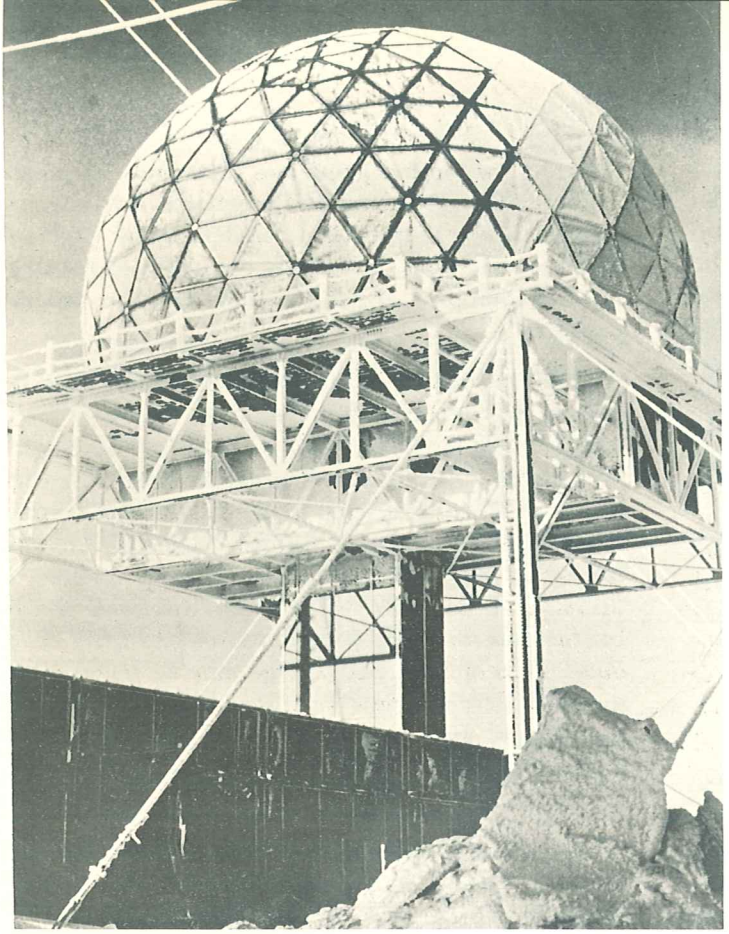
Internally these large domes are most advantageous in the flexibility of great floor space unimpeded by internal supports. Their form makes for ease of heating, cooling, lighting and ventilation, and speed of erection; low upkeep and foundation requirement lowers cost dramatically as against conventionally framed structures.

The St. Louis "Climatron" of 1960 is 175 ft. in diameter, 70 ft. high at center, and is covered with ¼ inch plexiglass infill. It embodies an advanced system of climatic environment control, since it houses the tropical and semitropical vegetation section of the Missouri Botanical Garden. The climate control system was developed by Dr. F. W. Went, Director of the Garden. Without internal partitioning, any required climatic condition may be stimulated, with temperatures ranging between 75 degrees and 100 degrees. Air conditioning and moisture control are maintained by a central computor through which every phase of the mechanical apparatus is programmed and controlled. In 1961 the St. Louis "Climatron" was awarded the Reynolds Memorial Award as a "structure of greatest significance to aluminum." This is the first time since its inauguration that this award has been given to a U.S. building.

Since 1958, Fuller has travelled extensively in the Orient, and much of his recent research has been devoted to solutions of the major shelter needs existing there. Studies have been directed towards utilizing the kinds of material, skill and industrial advantage which may be immediately and locally applicable.

Initial experimental designs included a low cost geodesic tensegrity dome, in bamboo, which incorporated new developments in tensegrity principles further described below. These promise as much saving, in weight of material invested against volume enclosed, over regular geodesics as these have offered against other conventional structures so far. Also related to this development are plans for three domes to be built in Japan, two of 200 ft. diameter, and one of 750 ft. to enclose 14½ acres of column free space.

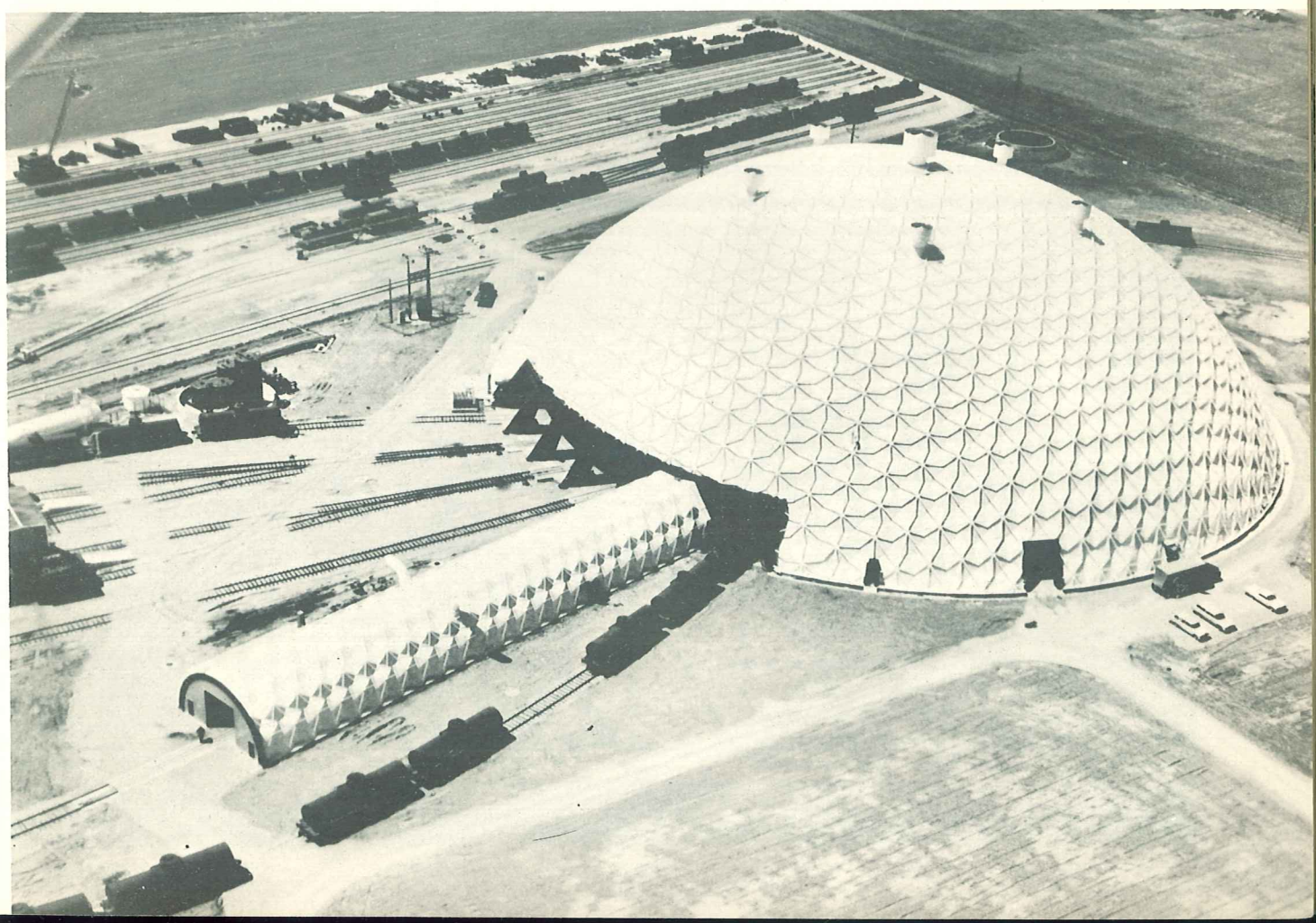
An advanced phase of the new tensegrity development, alluded to above, was the subject of a senior class project at Southern Illinois University in 1961. Under Fuller's guidance, a 72 ft. diameter dome, 50 ft. high at center and enclosing 4,000 square feet of floor area, was calculated and manufactured. The new "Basketry" geodesic tensegrity represented the



1956 "Radome" for Artic DEW Line

"Geospace" Paperboard Dome, Monsanto Chemical

Union Tank Car Co. Dome at Wood River, Illinois—12 stories high



first reduction of tensegrity principle to practical purpose as an environment control enclosure, though many fully spherical and mast type experimental structures had been made since its discovery in the early 1940's. The structural members of this new dome were 2 in. by 4 in. Douglas fir, but the system may be equally well employed in other materials. The weight of framing structure was 4,480 lbs., and the cost was approximately $1,000; at 25 cents per square ft. enclosed, this compares more than favorably with the $3 to $4 per square foot of conventional structure. This dramatic material economy is effected by the "discontinuous compresssion/continuous tension" principle which, in this particular structure, enables wooden members to be bolted directly to one another so dispensing with any special hub joining system. This new class of dome opens up possibilities of phenomenally low fabrication costs, and may obviously be produced using relatively simple technical facilities, as in the lumber industry, more readily available in areas where need may be greatest.

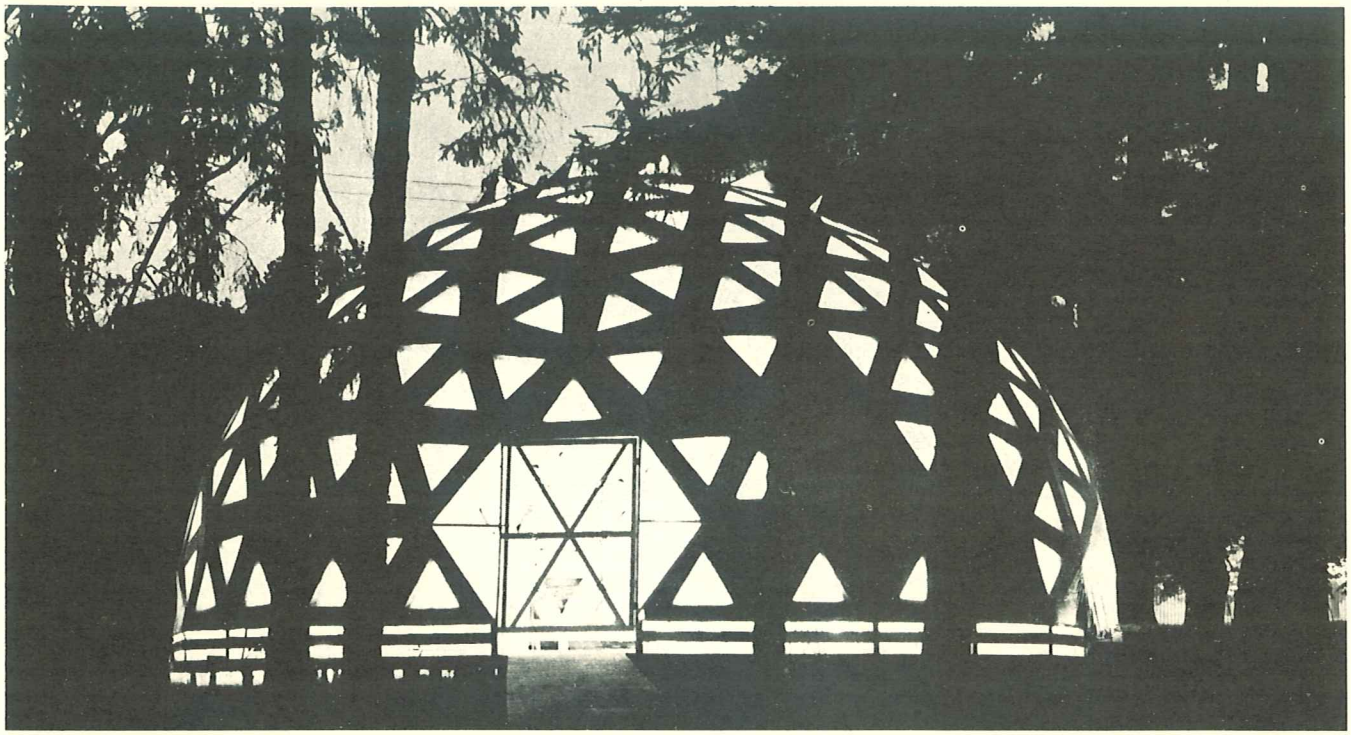
In associated development with the foregoing tensegrity, was another form—the "Aspension geodesic tensegrity" — so called from its capacity to rise "synergetically" on site. Designed to be factory woven, like a great fishnet, this structure would be delivered to site in a tight bundle, where, pulled radially outwards by its edges to a base ring circumference of compression, the center would rise by itself until final outward stretching made a rigid domical framework.

To sum up all the possibilities suggested by these and other more recent and spectacular applications of Fuller's structural principles is beyond our present purpose. Their material and functional diversity, and demonstrated performance under many different climatic conditions, underlines the width of the structural philosophy of which they are the tangible product.

This philosophical approach to design sets the role of the architect and engineer within a larger context. He is called upon to exercise his creative capacity in a fully comprehensive manner. His function is no longer restricted to the provision of fortress-like, minimal defenses against inclement natural forces. It may now expand to devising systems for utilizing such forces through environment control instruments on a par with other, more highly developed, tools of man. Advantage may be taken of the material developments in alloy chemistry, plastics, metallurgy, and in the advanced mechanical and electronic means now available as technological resources.

Within this reorientation, it is implied that such widened "prime design responsibility" also includes designing the means whereby such full environ advantage may be eventually shared by all men. Creative individuals, in our time, have largely relinquished such initiative to other social agencies. Fuller, in his recently published essay on "The Architect as World Planner," suggests that the developed and proven competence of world architecture and engineering in the handling of large scale environment operations now requires that they resume this wider anticipatory planning function.

42 ft. diameter Paperboard Dome, "Gran Premio" prize at Milan, 1954



# MAX ABRAMOVITZ AND HIS ASSEMBLY HALL

*By Walter M. Johnson*

In a very handsome, yet modest, office on the fifth floor of 630 Fifth Avenue, New York City, works one of the present day's outstanding architects, Max Abramovitz. As stated in the *New York Times* of September 24, 1963, "The man in the gray flannel suit isn't always an advertising man; add a button-down collar shirt with a black knit tie, and he's usually an architect. Behind this conservative ordinary exterior he is apt to be engaged in some of the most dramatic and unordinary work of our time — the creation of those large, costly and occasionally beautiful structures that make up the city scene."

Max Abramovitz was born in Chicago, Illinois May 23, 1908. He attended Crane Technical High School. While a student there he wrote a thesis on the development of American architecture since Colonial days. When asked why he selected this theme, his colleagues say he cannot recall just why he chose the subject. After graduation from Crane he worked in a bank, and at night went to a school of banking. It was during this time that he found himself doing drawings and switched his night studies to architectural drafting. After a year and a half of night school, he entered the University of Illinois, Department of Architecture, where he received a Bachelor of Science degree in Architecture in 1929. He was a teaching assistant in the Department of Architecture during the school year 1929-30. He left Illinois to accept a teaching position at Columbia University, School of Architecture, in the fall of 1930. He received an M.S. degree from Columbia in 1931. It was then that a fellowship from Columbia enabled him to study abroad for two years at Ecole des Beau-Arts in Paris and travel through Europe and the Near East. It was while in Paris he met Anne Marie Causey, who is now Mrs. Abramovitz.

Mr. Abramovitz returned to the United States in 1934 and joined with W. K. Harrison as a designer, later as the firm of Harrison and Fouilhoux. It was at that time that he did some work on the New York World's Fair of 1939. While working with the firm of Harrison and Fouilhoux he also served as a Visiting Professor of Architecture at Yale from 1937 to 1939. He became a partner in the firm of Harrison and Fouilhoux in 1941. After Mr. Fouilhoux's death in 1945 the firm became Harrison and Abramovitz.

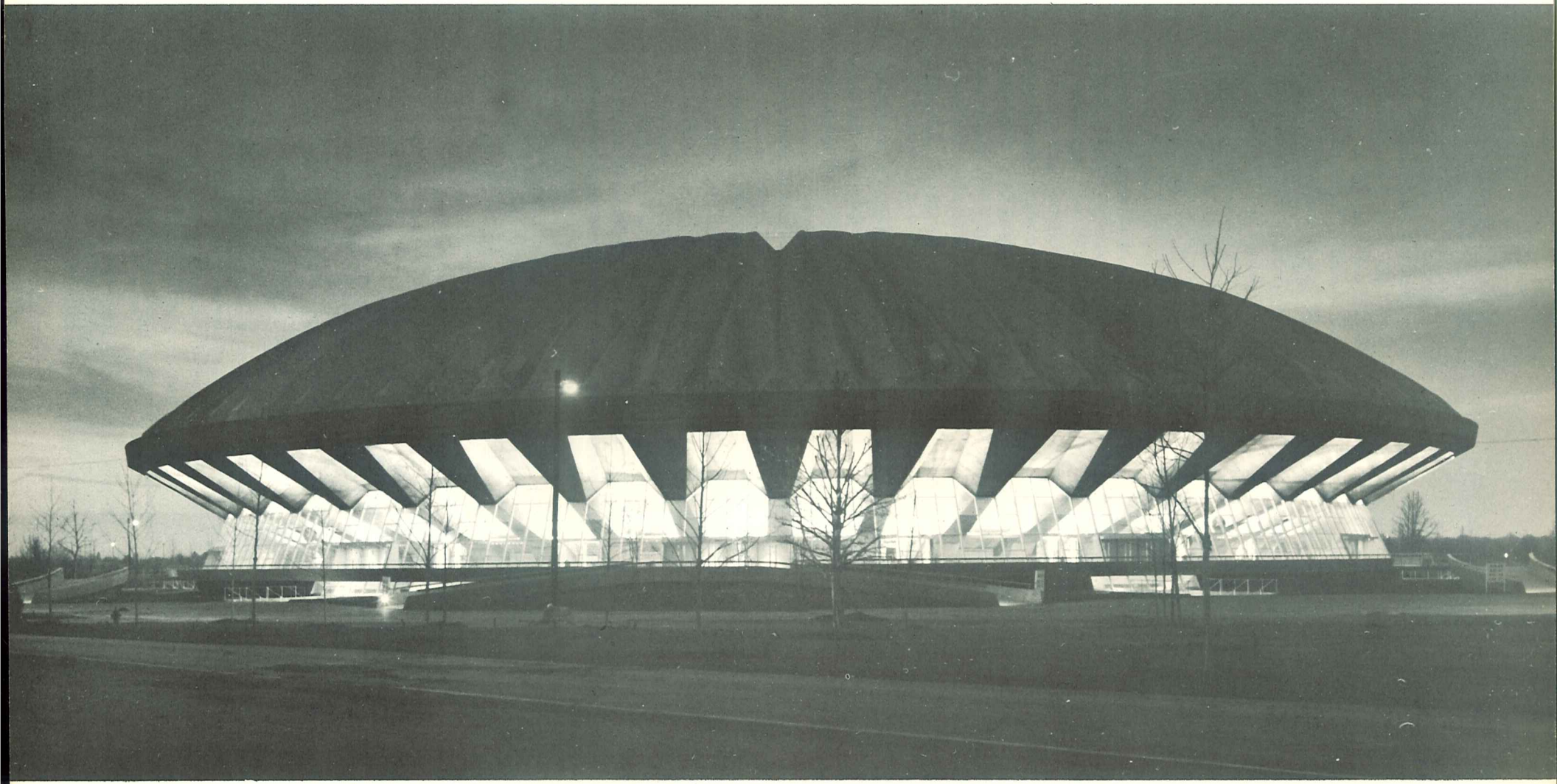
From 1942-1946 Mr. Abramovitz was in uniform, the last two years building air fields in China as part of the engineering staff of General Chennault's Flying Tigers. He received the "Legion of Merit" in October of 1945 and returned as a Lt. Colonel in the Corp of Engineers. He was recalled to the Armed Forces during the Korean Period in 1950 — then terminated his services in 1952 as a Colonel with the Air Force and returned to his office.

He was deputy director of planning for the United Nations Building in New York (1947-1950). Since 1952 he has worked on many notable buildings, including the United States Embassies in Havana and Rio de Janeiro; Chapels for three faiths at Brandeis University, the Corning Glass Building at 717 Fifth Avenue, the Philharmonic Hall of the Lincoln Center for the Performing Arts, the new Time-Life Building at Rockefeller Center, and the University of Illinois Assembly Hall which was dedicated on May 3, 1963.

In designing the Assembly Hall at the University of Illinois he realized a dream. Years ago he worked on a large commercial stadium-auditorium with a program and principles similar to the Assembly Hall. "After it was done I thought 'wouldn't it be nice and more vital if I could get rid of all this junk.' I stripped the model of all the extraneous elements and suddenly felt just the big space. You didn't see columns, the stairs, the concessions, or the ramps. The form just remained simple and bold. When I started work on the Assembly Hall, somewhere from my sub-conscious I realized that perhaps here was an opportunity to do what I had been seeking to do."

"Everything vital in the building is seen and the unimportant elements recede." He feels the Assembly Hall should be an important cultural arm of the University—used for every conceivable cultural event. "I can't imagine anything we can't do with it." Mr. Abramovitz feels that people should not have to ask why a building was designed a certain way, but rather feel that "it's the only way it should have been done."

The Assembly Hall was designed as a multi-purpose building with a seating capacity of 16,000. No walls, no windows exist in the structure, which consists simply of roof and floor. It is a bowl with fiber-glass folding seats. A glass enclosed concourse a quarter-mile long girds the halls, which can be used as a tremendous exhibition area. Office areas are to be found underneath the concourse. Forty-eight different types of lighting fixtures are used, all especially designed for the structure. It is a 128-foot structure



University of Illinois Assembly Hall by Max Abramovitz

Ezra Stoller Associates

from floor to top of dome; the hall is as high as a 12-story building. Its diameter is 400 feet. The edge-supported dome is the largest of its kind in the world. Six different ramps lead from the outside of the building to the concourse, while 24 bridges go from the concourse into the broad arena. The floor itself covers 15,000 square feet. Its oval circular shape gives it an exciting, dramatic appearance. It is a structure that should be experienced rather than described.

The area surrounding the Assembly Hall is landscaped with broad lawns lined with groves of sycamores. These play a key role in the landscaping of the thirty-acre site upon which the Hall stands. Four parking lots have been constructed at the corners of the area. These will be shielded from view by Tall Hedge Buds Thorn on the outside border, and by Pyramid European Hornbeak on the inside corners facing the Hall. Within the parking lots many small islands have been built, and Moraine Honeylocust trees will provide shade in these areas. There are four approaches to the Hall. The west approach is the main entrance.

Visitors are welcome Monday through Fridays from 8:30 a.m. to 5 p.m. If you are contemplating a visit to this very outstanding structure it would be advisable to write ahead to the Director, Mr. T. P. Parkinson, for further information concerning Assembly Hall visitations.

As an architect, Mr. Abramovitz sets a pace and a tension that he controls skillfully, carrying his staff along at the same high voltage rate. Called fast and fair he is admired by his colleagues, and the trades, a tribute considered the architect's highest compliment. He is not afraid to call architecture, art. His honors include American Institute of Architects Award of Merit for his design of the Corning Glass Center; three Chapels at Brandeis University, as well as others. He received an honorary Doctor of Fine Arts degree from the University of Pittsburgh in 1961 and the Alumni Association Achievement Award, University of Illinois, in 1963.

As an appropriate recognition of the achievements of a native son, there is scheduled at the Krannert Museum, Urbana, November 3 to December 1, 1963, an exhibit; its title — Architecture by Max Abramovitz.

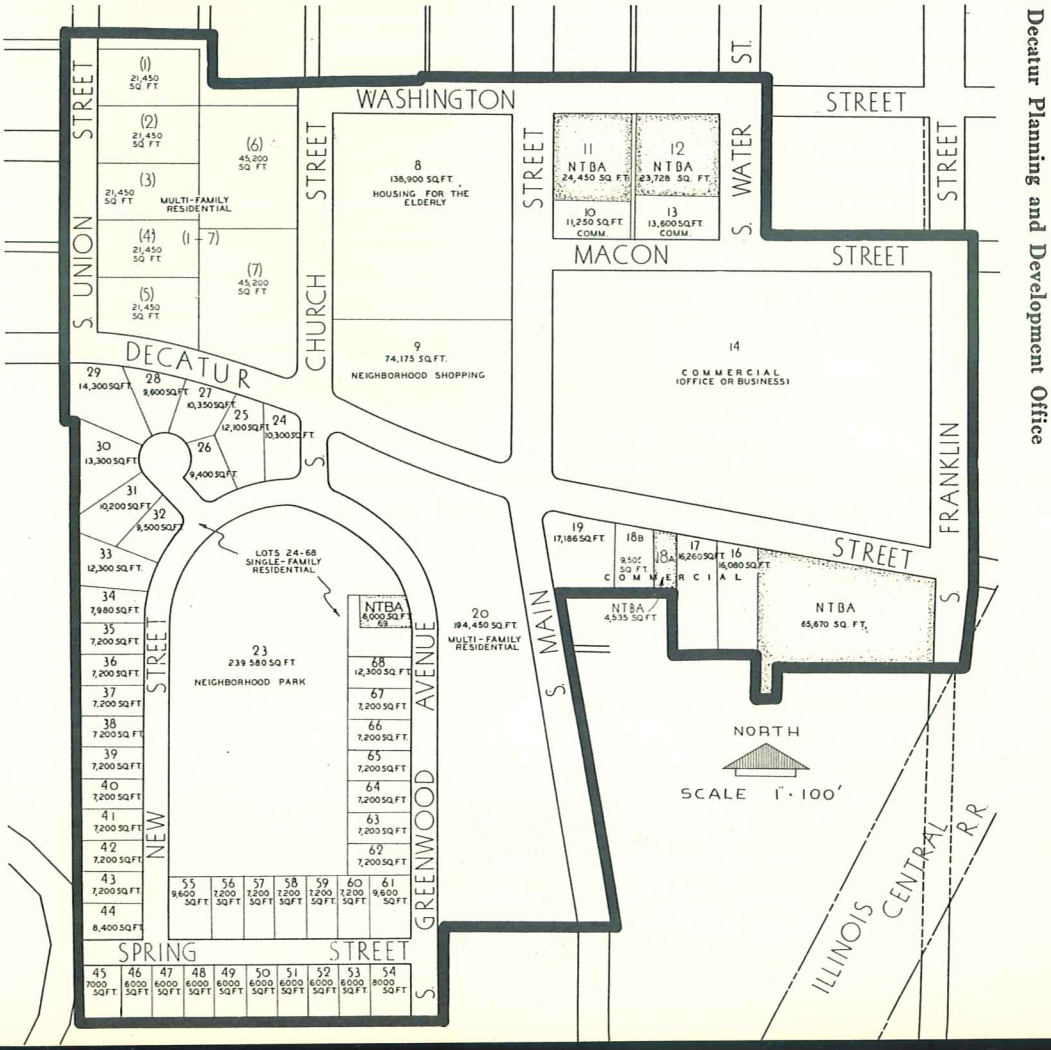
University of Illinois Assembly Hall: Interior and exterior

Assembly Hall: Concourse

Photos courtesy of University of Illinois


The Decatur Herald & Review

**Land use plan, Greenwood Urban Renewal Project—Decatur, Illinois**




Decatur Planning and Development Office

# TOWN AND CITY ENVIRONMENT

*By Stanley G. Wold*

We shape our environment, and in turn, environment shapes our lives. The buildings, streets and parks of a town can enrich or impoverish patterns of living. City planning, the art of organizing urban land, space and buildings, seeks to enhance the quality of life in towns and cities and to strengthen their role as nuclei of the national culture. It is an old art. The masters of the Renaissance often were not only painters and sculptors but also designers of grand boulevards, plazas and fortifications. Archeological excavations of cities which grew and waned around the nourishing Tigris and Euphrates rivers have revealed the remains of ancient courts and avenues planned for kingly ceremony.

Today one may encounter planning activities of several kinds. Large scale urban renewal projects receive much attention. These typically involve clearing and rebuilding depressed or blighted areas of a city and are usually supported in large part by the Federal Government. Rehabilitation projects in which existing buildings are renovated are becoming more important. Some efforts are initiated and supported locally and often aim at strengthening the community's economic vitality by improving shopping facilities. Common examples of planning for the integrated use of multiple commercial facilities are the shopping centers which have become so much a part of our everyday living. These range from the small cluster or row of markets and shops to the large and complex regional centers which are nearly cities of themselves. Such centers are often developed by a small group of large department stores. Citizens' groups have been effective in encouraging individual property owners to renovate buildings, houses and yards, usually as part of a larger city renewal program. Large suburban tract developments by private builders also illustrate effective planning on some occasions. Encompassing concepts of the nature of urban life are being tested in completely new cities. The plan for Brasilia, the new capital of Brazil, by Oscar Niemeyer and Lucio Costa, is widely known and has been praised and vehemently criticized. Le Corbusier, one of the world's great architects and planners, has guided the growth of Chandigarh, capital of the Punjab, India. This new city and Corbusier's buildings for the capitol complex will be studied for years to come.

The art and craft of city planning is today meeting complex and perplexing problems. Urban America is changing under a tumultuous wave of city building. The present effort to reorganize urban communities, of a magnitude not seen for three-quarters of a century, is in response to many forces. Staggering increases in population have overwhelmed cities, and movements from country to town have added to the pressures of numbers. Population movements from city to suburb have led to unwieldly conglomerations of municipal units, and changes in habits and means of travel have choked transportation routes in spreading metropolitan areas. Smaller communities, once centers of marketing, mining or railroads, have sought new roles.

The enhancement of the environment is, at its core, an aesthetic problem, but many tasks and methods are not typical of the arts as usually conceived. Although decisions in the past were often made and implemented through the power of an autocratic ruler, our commitment to a more open society requires the involvement of many people, and especially those affected. Since our ideals require that avenues be open for the realization of diverse values, planning must be varied and flexible. The first and essential requirement of a vital planning process is the continuing definition of the ends to be served. The very magnitude of tasks undertaken is distinctive. Philadelphia is engaged on a single project of reconstruction and rehabilitation of a 2,140 acre residential —commercial—industrial complex. The resources of money, time, energy and persistent determination required to bring even smaller projects to completion is great indeed. Purposes and means are interwoven with other functions of society. Economic and financial requirements must be met, and at times seem so crucial as to crowd out questions of the aesthetic nature of environments being newly created. Problems of human relations, transportation, public health and civic government must be solved to reach the aesthetic goal of an enriched quality of urban living.

City building affects the lives of many people, not always pleasantly. Great amounts of money, time and energy are committed to uncertain solutions of difficult problems, solutions with which we must live for an indefinite time. Small wonder then that there is controversy. There is strong criticism of inadequate procedures for relocating people displaced from project areas. Plans which did not consider the nature of neighborhood relationships created the seeds of even more unsatisfactory conditions. Large scale,

multistory housing projects have been particularly criticized on this count, and more varied approaches are being tried. Professional leaders feel that basic long term and aesthetic values have been sacrified through seeking the greatest immediate financial return from sale of land and from new tax revenues.

Many projects are being planned and accomplished in the Midwest, including major efforts in Chicago and St. Louis. However, it would be valuable to see planning in action in two different projects in cities of more moderate size.

Although designed to meet local needs, the Greenwood Urban Renewal Project in Decatur, an Illinois city of some 84,000 people, is generally typical. The project encompasses the almost complete clearing and rebuilding of a fifty-three acre tract bordering the southwestern fringe of downtown. Nearly two million dollars will be expended: just over a million from a United States Capital Grant, and about $704,000 from the city of Decatur, to be expended on street improvements, utilities and a park. In addition to the chance to have a new and rewarding environment for living, the city expects the project to result in a six to eight million dollar reinforcement of the local economy.

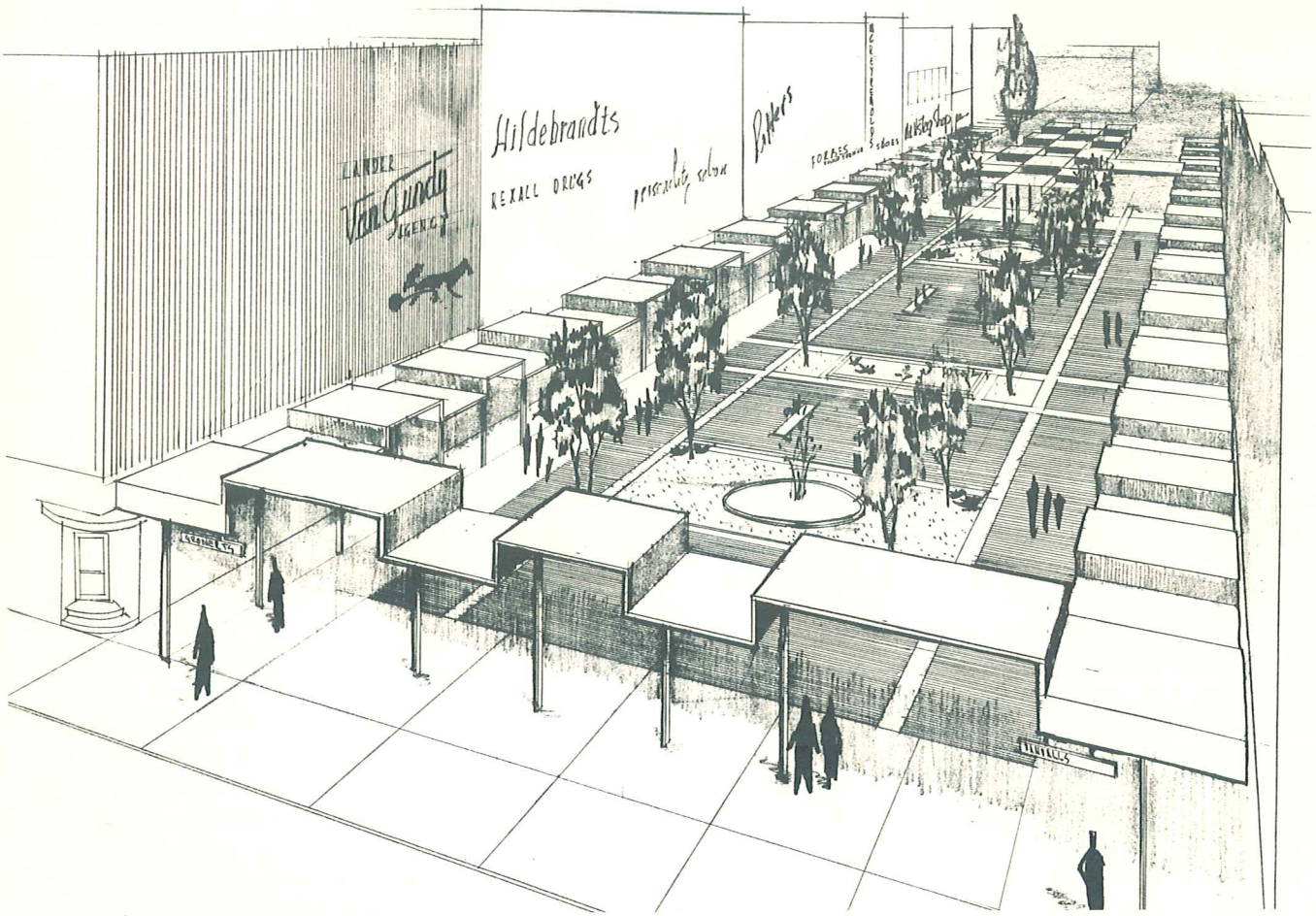
Well over four hundred families lived in the Greenwood area. Streets were old and narrow. Traffic congestion, small lots, substandard houses, overcrowding, non-existent playground facilities and intermingled commercial and residential buildings were characteristic. However, islands of well kept homes were evident. The proposed plan provides for the variety of residential, commercial, professional and recreational uses which makes a vigorous neighborhood possible.

Interest in renewal, developed in the early 1950's, was stimulated by a 1957 survey which identified seven blighted areas. The City Council assumed the role of Local Public Agency to deal with the Federal Urban Renewal Administration of the Housing and Home Finance Agency (URA-HHFA), and a local Advisory Commission was appointed. A prerequisite for federal assistance, the *Workable Program*, was approved by the HHFA in 1960. Eligibility and feasibility were verified through detailed surveys of existing conditions and potentials, and the URA approved the resulting *Survey and Planning Application* in May 1960. The second stage included detailed proposals for land use, plans for relocation of displaced families, provisions for public facilities (streets, parks, utilities) and solutions to questions raised by United States Agencies. The legally required formal public hearing was held. Criticism and support from the appointed Advisory Commission and civic and neighborhood groups were significant throughout. Approval of the second phase was announced in June 1963, and the greater part of the land has been acquired and cleared.

The success of such a project lies finally in the quality of the rebuilding. Private builders' proposals for purchase and development will be judged on four standards: the degree to which objectives and requirements of the redevelopment plan are met; the architectural, landscaping and planning quality; economic practicality; ability of the builder to fulfill his proposal and, lastly, the price offered. It is noteworthy that the price offered is the last of the four. Each proposal must include sketches of land use and typical buildings, and representative floor plans. Proposals are being received for the first parcel of land. The Greenwood Urban Renewal Project will soon give concrete affirmation of the city's confidence in the future.

The creation of a shopping mall, to be financed principally by the merchants concerned, is being actively considered in Normal. In anticipation of a significant growth in population, the people of this central Illinois city of 13,300 have developed a master plan through the cooperative efforts of municipal and civic groups with the advice of professional planners. As in many towns, strengthening the position of the downtown shopping area is a significant concern. People will seek out and respond to an interesting and pleasant place. The shopping mall, or pedestrian area with trees, benches and other amenities, has invested shopping with much of the interest of the old village market day. The impetus for the proposed mall in Normal came from the New Business and Business Development Committee of the Chamber of Commerce and Mr. Keith Middleton of the architectural firm of K. E. Middleton and Associates, A.I.A. Interest was further stimulated when twenty-five business men and city officials visited the successful mall development in Knoxville, Tennessee. The final realization of the plan lies in the future. Uncertainties and contrary viewpoints will stimulate the close study which is essential for success. A Normal Mall Association has been formed and is moving ahead with substantial support from those most concerned. The town itself has contributed $16,000 toward the project. The realization of a specific and limited project of this kind might well give this or any community the confidence and desire to work for larger goals.

Our towns and cities have many problems. Means of solution are often uncertain, and controversy abounds. Yet, city planning today presents a great challenge to the imagination. The goals are significant, and determined, creative effort can lead to worthy accomplishment. It is not necessary to surrender to the future.

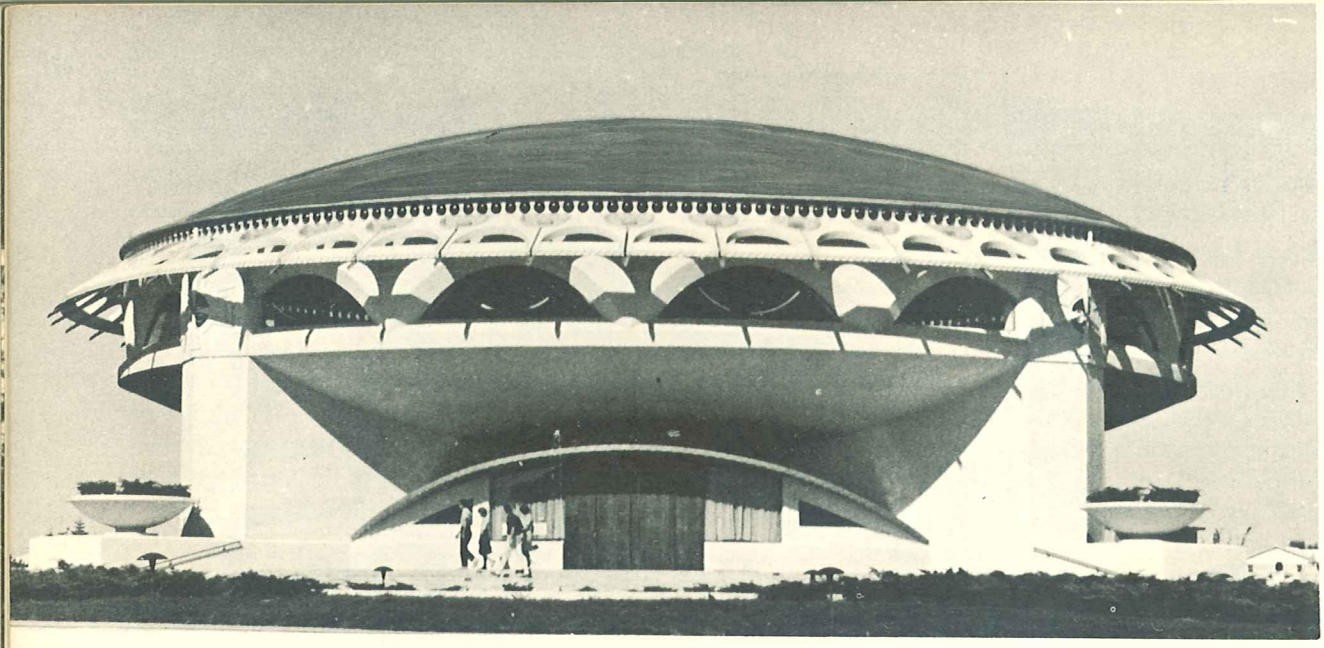



Proposed mall development in Normal, Illinois

K. E. Middleton & Associates, Architects, AIA

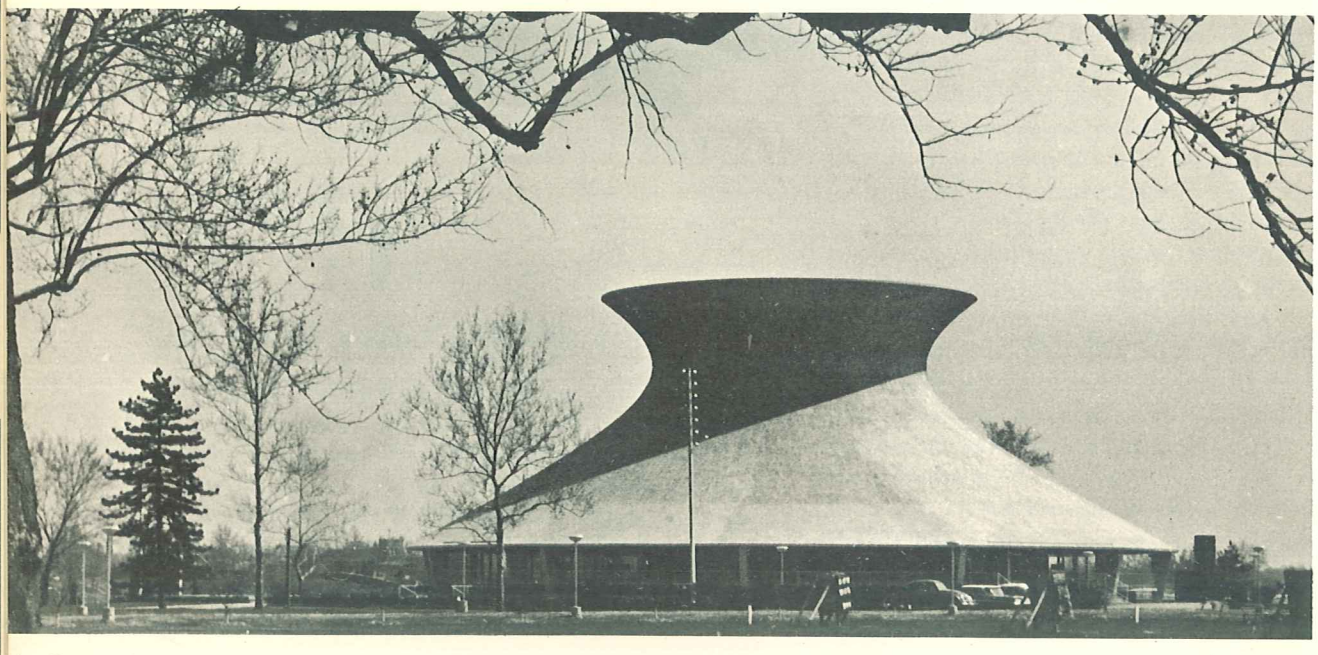
North Street, Normal—site of proposed mall

Pantagraph Photo, Bloomington



Greek Orthodox Church of the Annunciation, Milwaukee. Frank Lloyd Wright

Photos: George Barford



St. Louis Planetarium, Forest Park, designed by Gyo Obata, Hellmuth, Obata, Kassabaum

St. Louis Airport, Lambert Field, Minoru Yamasaki, Designer, Hellmuth, Yamasaki, Leinweber

# IN NEIGHBORING CITIES

*By George Barford*

This chapter, strictly speaking, doesn't belong in a book entitled "Architecture in Illinois", yet the editors felt that significant buildings so close to the Illinois borders might legitimately be included. Two fine buildings of Frank Lloyd Wright are nearby along the shore of Lake Michigan — the Johnson's Wax Administration Building in Racine, completed in 1939, and the Greek Orthodox Church of the Annunciation in Milwaukee, completed in 1961.

In the writer's opinion, the great workroom of the Johnson Administration Building is the finest creation of Frank Lloyd Wright. It has more grace and elegance than the Guggenheim, for example, and brings for the first time to a factory-associated building the element of poetry. One can only appreciate the great and mysterious space-feeling of this room by visiting it (tours are given daily M-F).

The Greek Orthodox Church in Milwaukee, on 92nd Street north of Capitol Drive, has some over-opulent touches of Byzantine splendor, yet when present at Sunday services, with the rich voices of the choir and the splendid vestments and fragrant incense, the setting seems appropriate. The church is shaped like a huge bowl, with the congregation seated on concentric levels and the altar at the base. Nearly all of the elements of the design of this building are based on the circle, sphere, or cylinder, as were many of Wright's late designs. Predominating are the Marian colors of blue and gold. This building has an advantage one would wish for more of Wright's works — an open, sweeping site in a residential neighborhood.

Also in Milwaukee, on the shore of Lake Michigan at the east end of Wisconsin Avenue, fly the giant cantilevered wings of Eero Saarinen's War Memorial. Four large concrete wings are supported on slender tetrahedral columns. During the day the building looks quite business-like, but at dusk it has a massive somber grandeur. Its architect says of it: "The building and finishes are rough. It is not a refined building, nor is any part of it hesitant or reticent. It depends for monumentality and dignity on the clarity of its structure, on its 'guts' and its simplicity."*

Built as it is on the brow of a steeply rolling bluff above Lake Michigan, the site is one which seemed to call for a cantilevered design, and Saarinen boldly set it forth. Here he had no need to dig a lake for his building to overlook — it was built in.

Twenty-five miles east of Illinois on U.S. 30 stands one of the most impressive college chapel buildings in the country, that of Valparaiso University. Architect Charles Edward Stade of Park Ridge, Illinois, and his associates Dolan and Anderson studied college chapels all over America and Europe in order to prepare the most efficient design. The size of the chapel, as one enters it from the western end, is startling. The nave is seven stories high with a center aisle 250 feet long. The altar is centered within an octagonal chancel over ten stories high, the roof of which is boldly folded to form a striking landmark visible for miles around.

Northeast of St. Louis on the Mark Twain expressway is the St. Louis Airport Terminal designed by Minoru Yamasaki. Yamasaki wanted the building to be a symbolic entrance to the city, and felt that of existing terminals the vaults of Grand Central in Manhattan were the most impressive. The basic structure of the St. Louis Terminal is a 412-foot-long barrel vault intersected by three cross vaults of equal size. From the air it appears as three octagonal domes joined by glass skylights. The low sprung arches give a feeling of lightness and airiness suggestive of clouds or wing-sections of aircraft. Inside, all partitions are low and free-standing for unimpeded traffic flow and a clear view of the great archway windows.

Soaring above the sweeping green of Forest Park is the St. Louis Planetarium, opened in the spring of 1963. Architects were Hellmuth, Obata, and Kassabaum, with Gyo Obata in charge of design. The spool-shaped building is itself a pure mathematical form, a "hyperboloid of one sheet" — a thin concrete shell which averages only 3 inches in thickness. The lower, wider part of the shell forms an umbrella to give space for exhibitions and protect the inner dome of the planetarium itself, which has a double wall for sound-proofing.

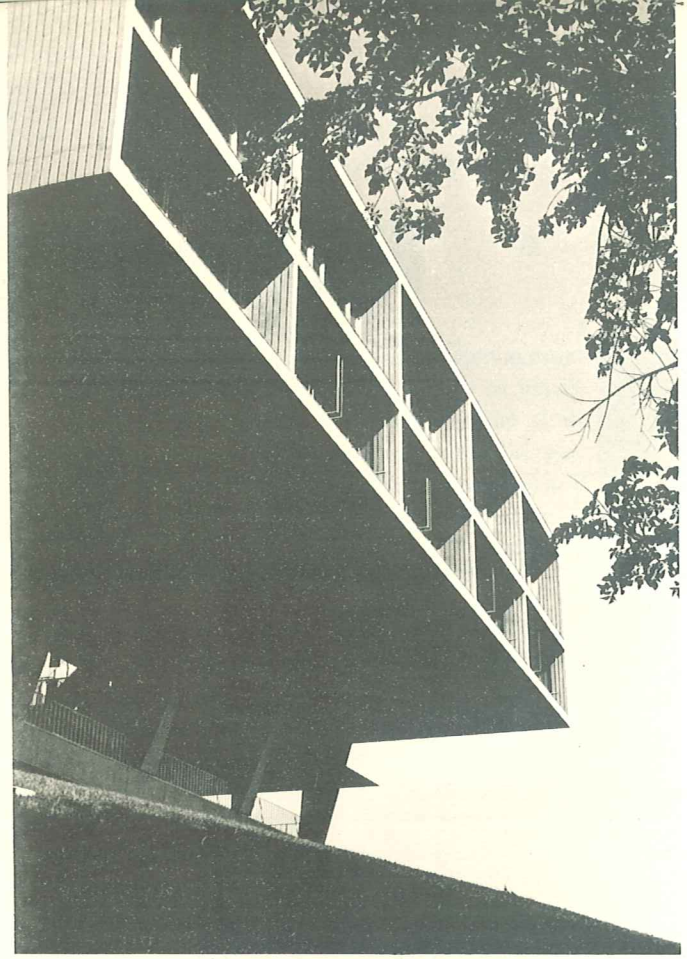
The flaring upper third of the shell, the part which lends the shape its unique beauty, serves also as a very functional parapet for the circular roof deck (which can only be seen from aircraft). Access to this observation platform is by a winding circular ramp which is wrapped around the exterior of the dome. The outward flare of the parapet shields the eyes of real-star watchers from distracting city lights.

**Eero Saarinen on his Work*, Yale University Press—1962

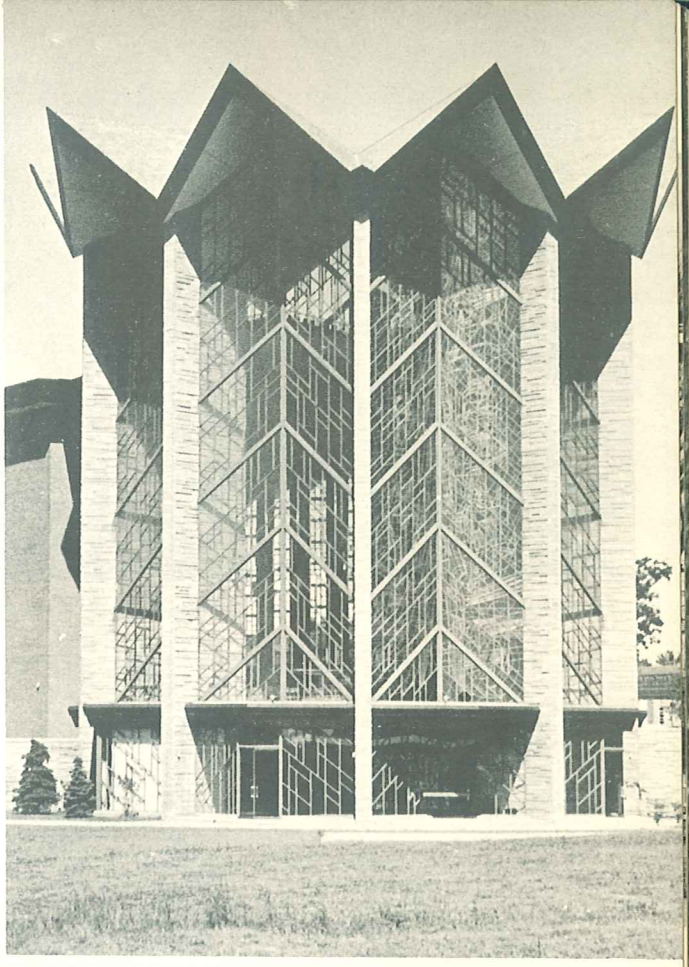
Lobby, Milwaukee War Memorial. Eero Saarinen

Photos: George Barford

Lobby, Administration Building, Johnson Co., Racine. Frank Lloyd Wright



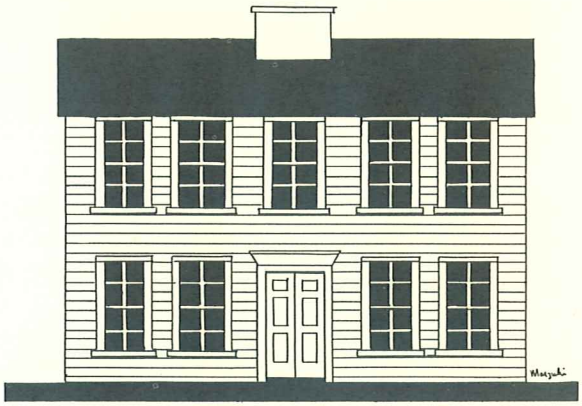
Milwaukee War Memorial



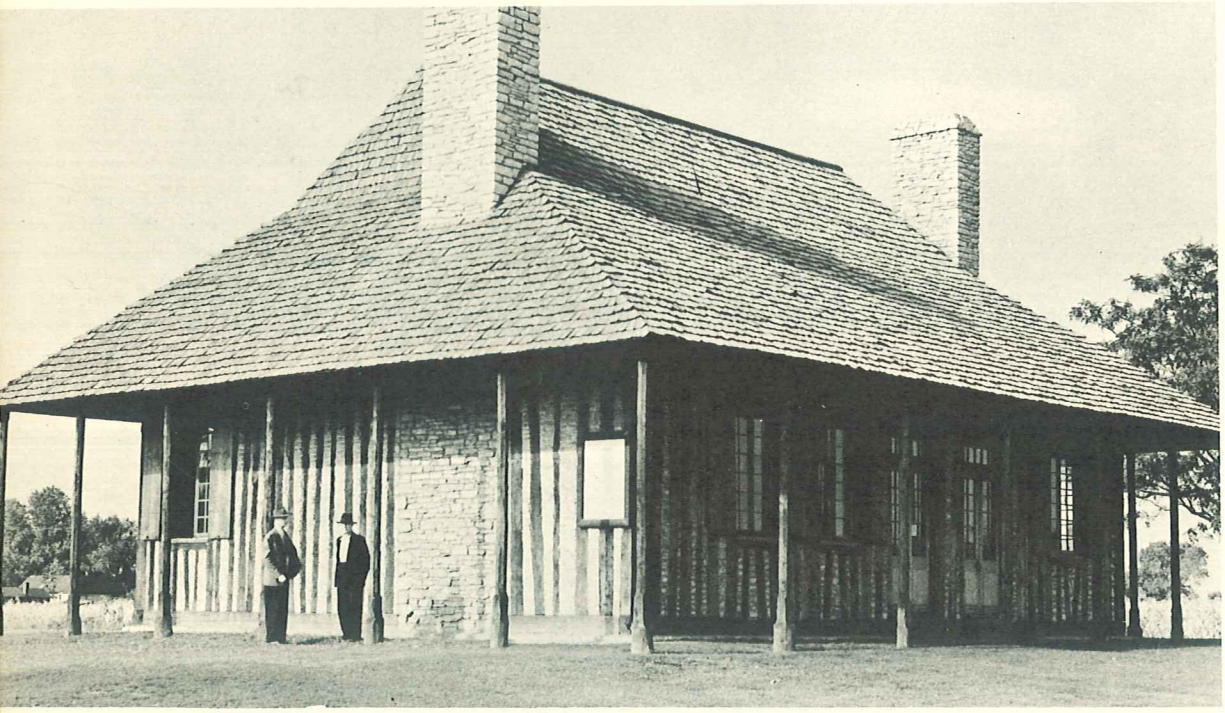
Chapel, Valparaiso University

Great work room of the Administration Building, Johnson Co., Racine

Log Cabin at New Salem — Alice L. Hoover



Early American — James Marzuki



Jean Baptiste Saucier House (Court House), Cahokia — Photos courtesy of Ill. State Information Service

Pierre Menard Home State Memorial, Kaskaskia — Hedrich-Blessing

# DOMESTIC ARCHITECTURE IN ILLINOIS: A BRIEF SURVEY

*By James Marzuki*

One of the primary needs of man is shelter against the elements. This need, of course, expands as man's life becomes more complex. The shelter must then satisfy a greater variety of needs, both physical and psychological. This brief survey, then, is concerned with some of the major trends in architectural style in Illinois from Colonial times to the early nineteen hundreds which helped meet these needs.

The architecture of Western man was first brought to Illinois by the French along with their efforts to colonize the land lying along the Mississippi River. Though most evidence of this building in Illinois has disappeared, at least one example remains. This is the Jean Baptiste Saucier house built about 1737 in Cahokia. It has the flavor of houses that remain in Ste. Genevieve and lower Louisiana. The walls are of vertical logs, spaced, and plaster filled. The roof projects out over the four walls and is supported by posts to form a covered terrace. Interior walls are of lath covered by plaster and the house boasted windows of small glass panes. Another example of architecture with the distinctive French projecting roof and terrace, though built much later (around 1800), is the Pierre Menard home in Kaskaskia.

Though the only true Colonial houses in Illinois were built by the French, many more early homes bear the design elements of those which were built in the East. I shall lump these together as *Early American*. These homes were built by the early settlers in our state after migrations along the Ohio River and from the southern states. They are of simple rectangular shape and usually bilaterally symmetrical. Chimney and fireplace were either in the center of the house or placed on both ends. The great architectural influence was classical. Naturally enough, they were built along lines that the settlers had known in the East and South. It is difficult to determine exact dates for these houses because they were built from about 1800 on and dot the landscape throughout the Midwest. There are fine examples throughout our state, though many are often disguised with additions and changes from other architectual eras.

It is probably pertinent to mention, at this point, the log cabin which is familiar to every schoolboy. These served as temporary structures for settlers along the frontier and were discarded when the settler reached the proper state of affluence.

After the Colonial and Early American periods, the *Greek Revival* or Romantic Classic style swept the nation, and Illinois was no less influenced. Two main avenues of design may be seen. First is the mansion style based directly on the great classical temple. These were usually formal in plan with massive portico, pediment and classical columns. Other classical details, usually fashioned in wood, were more or less abundant. Probably every town in Illinois contains at least one example. This same treatment was also given, at times, to the smaller cottage. The second avenue open to the builder was more modest. Lincoln's home in Springfield is an example. The basic form of the house was much like that of the Early American to which was added classical details. This typically consisted of column-like devices at each corner of the house with smaller columns framing the doorway. Dentils, frets, anthemion or variations ran across the front under the eaves. The ends of the house usually had a pediment treatment, full or partial. It is interesting to note that most of these classical ornaments could be purchased at the local millwork shop and added to any existing building.

The *Gothic Revival* came along with the classical and contributed a very distinctive flavor to our architecture. Many authorities lump the Gothic with the Victorian, but I prefer to go along with those who give the Gothic a separate cubby-hole. The Gothic house is basically formal in plan with a steep central roof resembling those of the great cathedrals. Windows were usually made in the shape of the pointed arch, and the house was finished with marvelous wooden imitations of medieval stone tracery. These wooden ornaments were also available at the local millwork shop. The architect, Alexander Jackson Davis, did much to make this style popular, and the Midwest, more than anywhere else, took this style to heart. Most Gothic houses have been remodeled out of recognition, but many fine examples remain. Princeton contains many in a good state of preservation. These houses were built in brick as well as in wood, but I feel the wooden examples with vertical siding best represents the feeling of this period.

Perhaps the architecture with the most raw vitality ever produced in this country is the *Eclectic*, or Victorian, Gingerbread, Carpenter's Gothic, Wedding Cake, Steamboat and Mansardic, whichever title you may prefer. I shall refer to this particular style as

Eclectic, since examples of these houses usually contain elements of architecture representative of all styles known to man. Though these buildings are oftentimes brutal and confused, no one can fail to recognize the spirit of individuality and vitality.

This style of architecture had its origins in Victorian England with much promotion by John Ruskin. Its champions in the United States were A. J. Downing and A. J. Davis. Calvert Vaux, an associate of Downing, did much to make eclectic styles availble to Midwesterners. He produced an illustrated book in 1857 called *Villas and Cottages.* This book, and others like it, was used much like the Sears Catalog, allowing builders to pick out elements to include in the final design. Thus, housewives, plumbers and carpenters became, in a sense, architects (or non-architects).

The Villa, of course, was the mansion built by citizens of wealth in town and usually modeled upon the traditions of the Venetian Gothic. "Continuous ease and leisure" dictated the informal plan of this style of house, according to Vaux. It was generously laced with bays and balconies of which the author said, "There can, indeed, scarcely be too many for the comfort of the house." Another hallmark of these houses was the tower or towers which were used. Finally, the addition of gingerbread ornaments completed the design; the more the better. The cottage style was much more modest, but like its big brother, was based on an informal plan. Bays and balconies were usually limited to one or two, and ornamentation was often established through pattern in shingles and siding. There are probably more examples of the Eclectic left in Illinois than of any other style, especially the mansion type which are costly to remodel. The cottages, which cost a few hundred to build, have been virtually altered off the map.

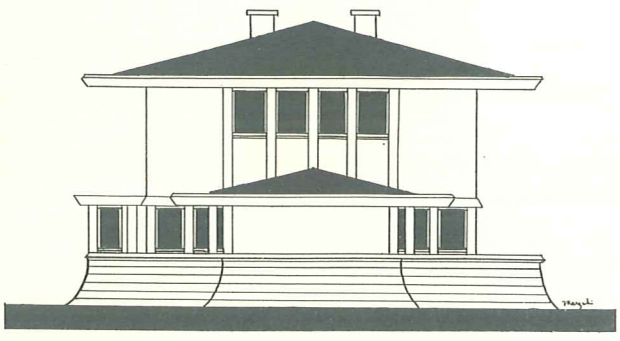
The final style in this survey I shall call *1900 Modern* for want of a better name. The architecture between 1900 and 1930 seems to be almost a complete nonentity, except where Frank Lloyd Wright and a few others are concerned, and most historians would just as soon forget it. However, in reading some of the literature of the time, I find at least a rumble of the basis for contemporary home planning, though certainly the predominance of mass produced boxes would lead one to think there is small support for this statement.

One of the illustrations is an elevation from the plan for a home by Walter Burley Griffin in 1913. The plan takes into consideration the informal mode of life that was beginning to take shape in our country and the utilization of variable space both in the design itself and in its environment. This house represents a rebellion against the elaboration of the Eclectic period and a return to a simplicity and function in building.

The prevailing philosophy among progressive architects of the "Chicago school" in the early nineteen hundreds was a "return to nature" and a sense of bringing the outdoors "in." Country living and flexibility, as well as making the house blend with the site, seemed to be the watchwords. The Griffin house and others like it seem to herald the future with generous overhangs and honest use of materials. These are typical of homes built throughout Illinois in this period, though there were many minor "Romantic Revivals' going on at the same time. To me, these 1900 Moderns are important because of their effect on *good* contemporary family dwelling units of today.

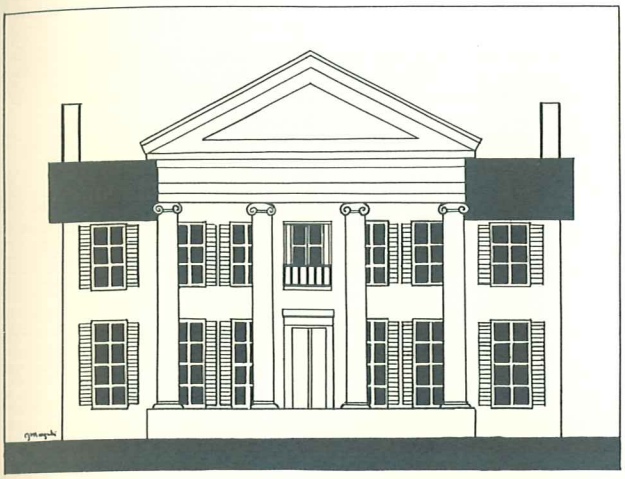
All of the styles discussed here abound in Illinois, though some may be pretty well altered. Since a home is usually the most important work of art to be purchased by an individual, perhaps much more importance should be given to domestic architecture in our art programs. Influence toward good architecture for everyone could become a reality.

Perhaps the nearest thing to a field laboratory for the study of domestic architecture in Illinois would be the city of Galena. Here among its houses you can find a virtual "history of style" in one town, and in the former market building is an excellent permanent exhibit of the history of architecture in Illinois. The houses of most communities, in fact, present their stories of human desires and values to the interested.



James Marzuki

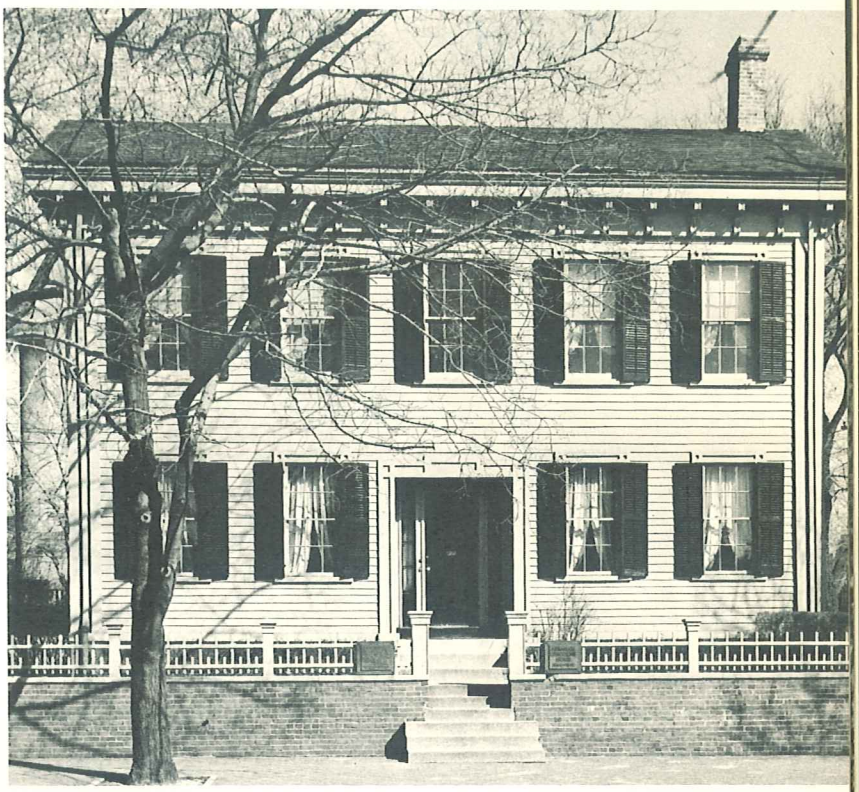
"1900 Modern" by W. B. Griffen



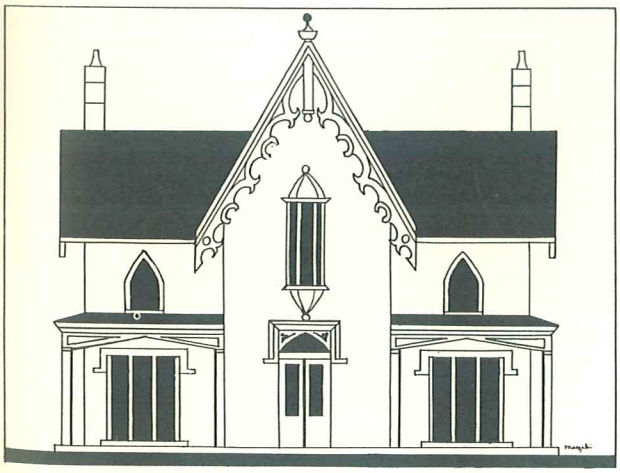
Greek Revival

Drawings: James Marzuki

Courtesy of Illinois State Information Service



Abraham Lincoln Home State Memorial, Springfield



Gothic Revival

Cecil's Studio, courtesy of Millikin University

Millikin House, now Decatur Art Institute—Eclectic style

# SOME EARLY WRIGHT HOUSES

*By George Barford*

The thought occurred, rather late in the season for editing yearbooks, that it might be interesting both to writer and, he hopes, readers, to visit some of the people who are now living in Wright houses and discover their reactions to being owners of well-known houses. The statement is sometimes made, in discussion of Wright's work, that his other other buildings are all right but his houses are unlivable. After visiting Robie House last summer and listening to Thomas Stauffer's glowing description of how well satisfied Frederick Robie was with Wright's design, and seeing for ourselves the sweeping grandeur of that house, we doubted the validity of the 'unlivable' statement. So with tape recorder in hand and camera around neck we set out to see.

The first house visited, and a leading contender for the honor of being the first of Wright's Prairie Houses to be built, was the Warren Hickox house in Kankakee, Illinois. Situated on (or almost on) the Kankakee River, the house has been owned for twelve years by Mr. Lawrence K. Donovan. I asked Mr. Donovan how he happened to acquire the Warren Hickox house.

"The house was advertised for sale, we went through it, and were quite impressed with the size and livability of the house. Taking into consideration the asking price of this house and the price of comparable houses or even much smaller houses, it seemed like a reasonably good buy. Also taking into consideration Mr. Wright's reputation as an architect, we thought it might be a sound investment.

"The thing that may have frightened many people from buying a house of this type is the apparent amount of repairs. When we moved in it needed a lot of decorating and painting inside and out. We remodeled the kitchen considerably. We went through Robie House at the time of the controversy about tearing it down, and there was a lot of it that reminded us of this house."

The Hickox house has a "T" shaped plan, the crossbar of the T being the longest part, consisting of a fairly standard Wright arrangement for these houses of library, living room (a word replacing 'parlor' at this time), and dining room. The ends of this wing are octagonal in shape, and most of the windows of this house, as in most of the Prairie Houses, are banded and leaded.

Mr. Donovan: "The leaded glass is quite costly to repair — we can't find anyone in Kankakee to repair other than very minor damage. If it is extensive, we have to remove the window and send it to Chicago."

The Hickox house has a living area 55 ft. by 24 ft. and the other area of the house is 55 by 22. There are four bedrooms and one and one-half baths. The full basement is the same size as the whole house, is warm and dry, and is spanned without a pillar or column. The Donovans are only the second owners of the house after Warren Hickox, who owned it until 1942.

Mr. Donovan: "The wall in the dining room was narrowed so the doorway to the living room was not so wide. A few built-ins have been removed. But one of the amazing parts about the house, the thing that seems to make it look modern, is the fireplace. As far as I know, that has not been changed. The mantel and all are exactly as when the house was built."

Southbound for the next visit, we went to Decatur to talk to Mrs. George S. Walker, who with her husband owns the Irving house, a warm and handsome brick house located near the Decatur Art Center. This house was designed by Wright in 1910, and is so well kept and handsomely situated that one wonders why it is included in so few books about Wright's work. No question of its authenticity — Mrs. Walker showed me the complete set of blueprints, with Wright's signature, that she is fortunate enough to have.

The ground floor plan of the Irving house, in fact the second floor plan as well, follow very closely the design Wright made for the February, 1901 issue of the Ladies' Home Journal, entitled "A Home in a Prairie Town", in that looking at the front of the house, are from left to right, the library, the living room, and the dining room. The exception is that extending farther to the left is a *porte cochere*, and balancing it almost exactly on the right is a screened porch. The plan for both floors, like the Ladies' Home Journal plan, is almost completely bi-symmetrical.

Mrs. Walker: "We are the fourth owners of this house — we bought it five years ago. The Irvings moved out about 1945; the Irving daughter was married and lived here for some time, then sold it. Quite

The E. P. Irving House, Decatur — George Barford

Coach House, The Avery Coonley Estate — James Howlett

a bit of the furniture Wright designed for the house is still here — the dining room table and chairs and the library table in front of us here. Originally the passageways between rooms were spanned by soffits as is the one in the hall, but they were boxed in to the ceiling by a previous owner. Set into the ceiling, just inside the living room windows, is a long panel for lighting which comes through stained glass.

"We spent quite a bit of time repairing and refinishing the outside windows ,which were warped and worn, but basically the house was in excellent shape structurally."

A house which pre-dated the Irving house by nearly a decade was the Ward Willits house of Highland Park, and Mrs. Sakip M. Altay, a young and charming mother of a sizeable family, graciously took time off from Saturday morning house cleaning to talk a little about the Willits house. She and her husband, an architect and graduate of the University of Illinois, are the present owners.

"We were looking for a large house, because of our large family, and my husband being an architect wasn't going to be satisfied with just any old house. We happened to be driving by here one Sunday afternoon, saw the house with a "For Sale" sign in front, took it from there, and here we are."

The Willits house is one of the most stately of all the early Wright houses, and situated as it is on the shore of Lake Michigan, was originally built as a summer house when Highland Park was a resort area. The house stands in a lushly wooded setting and is set apart from other houses by its starkly formal black and white. The ground floor plan of this house is very similar to Wright's second published design for the Ladies' Home Journal, "A Small House with 'Lots of Room in It' ", priced at $5800 (very optimistically, I'm sure). This plan appeared in the July issue of 1901, but the exterior of the house shown much more resembled that of the Harley Bradley house in Kankakee, presently a restaurant, than the exterior of the Willlits house. Stylistically one would be led to believe that both Kankakee houses preceded the Willits house, in concept if not in actual building dates.

The ground floor plan is no longer "T" shaped but cross-shaped. The *porte cochere* and entrance complex on the south is balanced by the dining room and porch on the north, and the large living room on the west is balanced by the pantry, kitchen, and maids' rooms on the east.

Mrs. Altay: "The thing I like about this house is that with all my children to care for I don't have time to worry about decorating problems; so this house is a blessing in that it doesn't need any decorating. One can either fill it with furniture or leave it rather bare, and it's still a beautiful house."

The last house to be visited was the Avery Coonley house in Riverside, a Chicago suburb. Jim and Carolyn Howlett are the owners of the former coach house of the Avery Coonley estate, and they own the sunken garden as well. The latter may sound strange to mention, but it is one of the most beautiful parts of the estate. The Howlett part of the estate, along with the rest of it, was featured in full color some years ago in an issue of House Beautiful magazine. I'll let Jim finish:

"The estate was built on an egg-shaped lot which covered four and one-half acres bounded by Bloomingbank, Scottswood, and Coonley Drives. We are in what was the stable here, and we're looking into the sunken garden. That raised area with the pergola was once the tea garden. The main house extends across the whole lot, and the driveway used to go all the way through. All the living in the main house was and is on the second floor. The first floor was used for storage and heating.

"One half of the house was master bedrooms originally — the Scottswood side. On the Bloomingbank side were the large living room and the pool, which was a lily pool originally. Extending beyond the living area was the servants' wing which comes out to the sunken garden here.

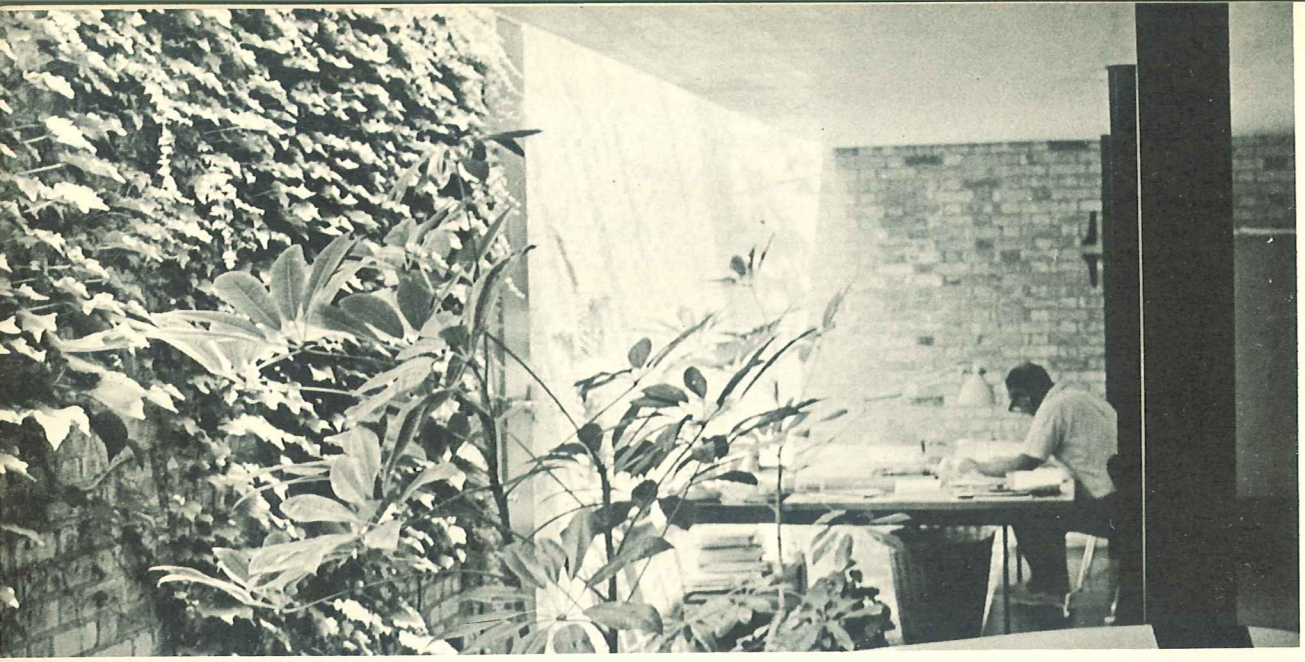
"Wright oriented these buildings for the angle of the sun at different times of the year. The house is so oriented that the high sun of summer is shut out by the wide overhangs, but the low sun of winter is allowed in."

The Howlett's are pleased with their house, and we must conclude from our small research at least in regard to those visited, that people who live in Wright houses are happy with their choice.

The Ward Willits House, Highland Park

Photos: George Barford

The Warren Hickox House, Kankakee

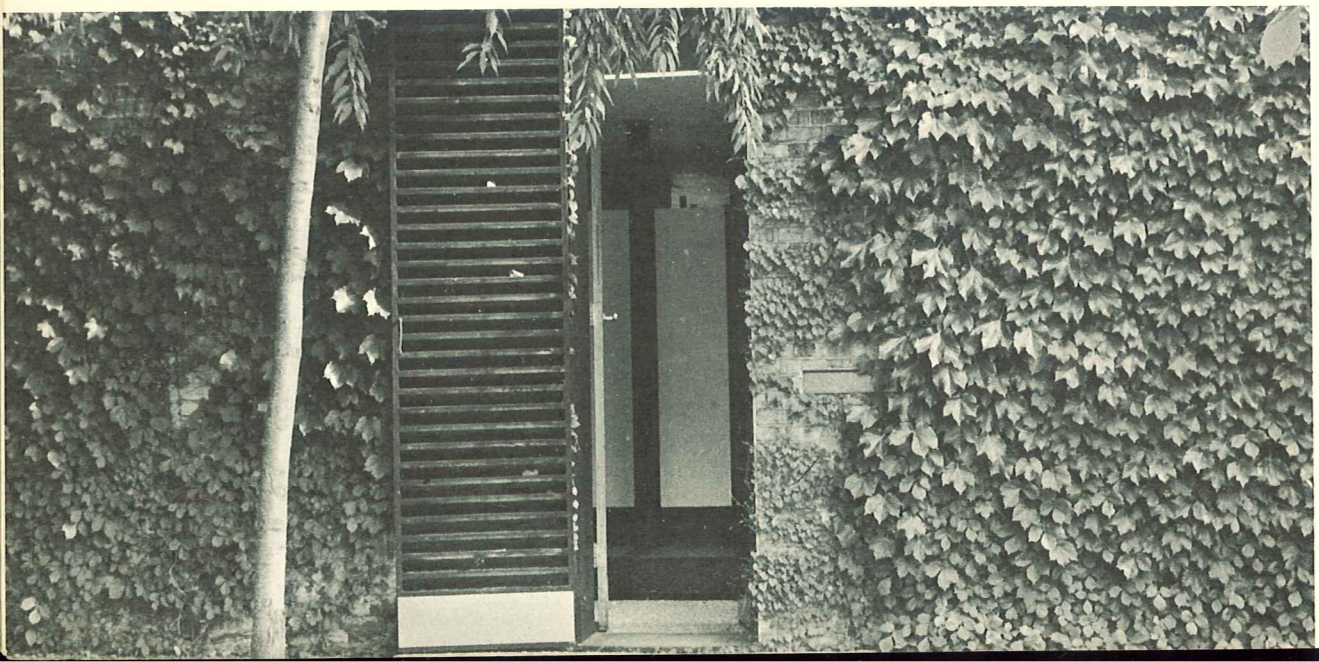


Work area, showing indoor foliage, Williams House

Photos: George Barford

Dining area, with outdoor living space beyond

Front of Williams House, with 10 ft. door



# A HOUSE AS A SPACE

The editors traveled to Champaign to see and photograph the home of architect A. Richard Williams, who designed the Art buildings at both ISNU and Eastern and who is in charge of Graduate Design in the School of Architecture at the University of Illinois. Mr. Williams spoke revealingly of his aims and problems in designing the house, and the following are excerpts from the tape recording of the conversation.

DICK WILLIAMS: What I tried to do in the beginning —was to make a house that was more or less one room having zones normally used for different activities—living area, dining area, bedroom area, work area and then those that would have to be contained behind walls such as bathrooms, kitchen and storage. And I discovered early in the process that there was a minimum core size. You can't have an inner core system in a small house because all you would get would be a hall on each side. This present arrangement won't shrink any more. You can't shrink it down including the bathroom, kitchen and storage areas, to anything less than it is.

STANLEY WOLD: When was the house originally constructed?

WILLIAMS: In 1948. It's a two stage construction, really. When I built it, I planned to make it larger sometime later. The original part is what you see in the platform (raised teak floor) here.

GEO. BARFORD: The walls came down to meet the platform edges?

WILLIAMS: When I enlarged it I pushed the front and back walls outward and walled in the redwood side walls with brick.

G.B.: So the redwood is buried in these walls then.

WILLIAMS: Yes, as insulation.

S.W.: What kind of bricks are these?

WILLIAMS: They're Chicago Common laid in Flemish Bond. They are made by the Illinois Brick Company. It is just their most inexpensive soft brick. The ends are wire-cut, the clay is wire-cut and the side is an extrusion. That's the difference in the texture.

G.B.: You mentioned earlier that you couldn't shrink the inner core below a certain size. What, roughly, is that size?

WILLIAMS: Oh, about 8 by 15 feet. Of course the reason for having it as a core is that traffic and circulation are better when they are closer to the center of the plan. It gives you the peripheral spaces as more or less dead end spaces. You can see that's the way this works out. Sleeping area in that corner, working area in that corner, music area here, living area, and then that corner is the entrance to the garden. The storage cabinets in the core relate to the areas they are near.

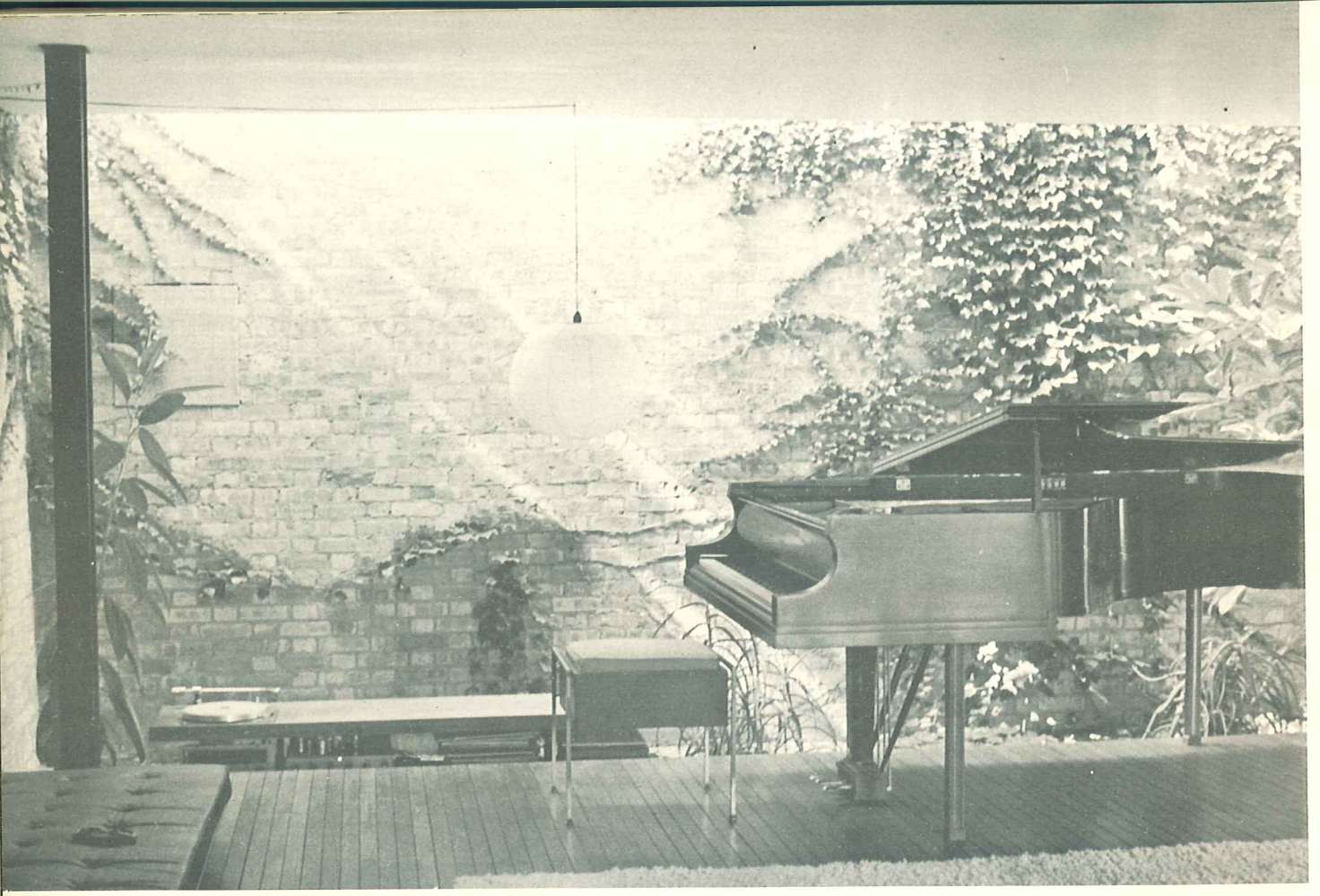
G.B.: In other words, the storage area for your drawing materials is next to your drafting table, the bedding over here, etc.

WILLIAMS: But the principle is that the storage areas are related to the traffic lines which are free of the outside wall. There doesn't have to be anything against the outside wall. Too, in order to achieve the feeling of spatial unity, all one space, I wanted to keep everything off the walls which defined this space. In other words, the perimeter walls are all one material or should be and this does describe the space you see. You can imagine now if there were closets against it you would lose the sense of continuity.

Another way I tried to achieve that was by making this floor, which is raised, in oiled teak. It is raised about a foot above the grade level which is the gravel. Having that gravel area continuous on the north side under the skylight allows greenery, potted plants and the vines to establish continuity of green, and then, as much as I could, I repeat the color scheme outside and inside. This is very personal and subjective but I feel that black is the best color for the expression of structural continuity, in other words, for that which defines the edge of something. You see the ceiling is held away from the wall and has a black reveal. The black describes in a linear way what the space is trying to describe. Black stripes divide the floor into structural bays.

G.B.: I wondered why you added wood strips to the steel columns insteading of just leaving the metal.

WILLIAMS: The steel by itself visually looked weak, and then there is a certain tactile quality to the wood. But it isn't quite resolved. I am going to take another wood strip and hollow it out to a sort of channel shape that will fit over the flange of the post and the joint between the wood and the steel will occur inside instead of on the face, which I think will be a little more pleasing. But those are some of the details you have fun with. Then I tried to express the feeling of the ceiling, by virtue of



Music area, Williams House

Corner of living area

its complete whiteness and complete non-tetxural quality, as a foil for all the other textures. I feel that this is always necessary, to achieve a kind of moment equilibrium, to use the equivalent of mechanical moments, in textures and colors, to have a kind of unexact law.

S.W.: I noticed you didn't paint the ceiling.

WILLIAMS: No, I like the feeling of plain plaster. Even if it does show spots and where the roof leaked. You always know plaster is a suspended material; it is held by something else. It doesn't hold itself. I tried to explain that by showing it separate from the columns where the columns go through the holes there in the ceiling, and by having it away from the walls as I described before; and then it further expresses its suspended nature by the fact that the walls go beyond it at the top. All the vertical surfaces pass the ceiling surface.

S.W.: It is a very strong sensation where the plants, the vines, go up beyond the ceiling.

WILLIAMS: Well, yes, that's the reason for it. The skylight emphasizes this. This is a kind of spatial calligraphy, if I can use that term, (and I don't mean as one of my students once asked, 'skywriting,'). It's a way, I think, to use linear pattern to express the structural system and continuity in such a way that you feel the three dimensional property of the space. For example, these teak strips in the floor overhang slightly. There is no edge there. There is a feeling of projection into space. In the same way the panels forming the core are held away from the floor so you are more aware of space going through and surfaces going through and by a little bit of subtlety in proportioning these panels and the white burlap panels you suggest a kind of gravity-defined suspension, which is a trick but still an idea to try to make it seem more three-dimensional. I think this works because so many people who come in for the first time seem to like to remain poised in space.

S.W.: I noticed this very strongly in taking the pictures. You stand out in the middle of some place but you feel oriented to the whole thing.

WILLIAMS: Different people react differently but the main thing is motion, moving through the space. Dean Weller, for instance, every time he comes out, goes into orbit around the core.

G.B.: Of course, part of the reason—there is room to wander—there is a space you can move around in.

S.W.: You mentioned, when we started to take the pictures, the importance of the greenery at the end of the wall. Sitting here one can see that the dominant texture of the brick wall is certainly important in defining the space. It ties in the whole thing.

WILLIAMS: One thing I wanted to consider — in a neighborhood already built up, what could I do to fit it in with a group of colonial and other usual kind of houses? I thought, well, I could try to harmonize with materials, form, scale, etc. This is the usual way. But I thought — here's a chance to harmonize by a kind of non-architecture, which relies much more heavily on landscape. The trees and woods which can occur anywhere, in high dense planting or not, and the vines and so on erase the house. It is a very discreet house.

G.B.: Yes, it is. We went past it before we saw it.

WILLIAMS: Another reason is that I wanted a contrast of coming through landscape, through woods, and through the very narrow door, so that you get a contrast of open and closed space.

S.W.: As you come in you are very conscious of the teak floor and the house atmosphere but just beyond is something of what you have just left outside.

G.B.: Do you know a house in Bloomington that's made of untreated wood in a thickly wooded part?

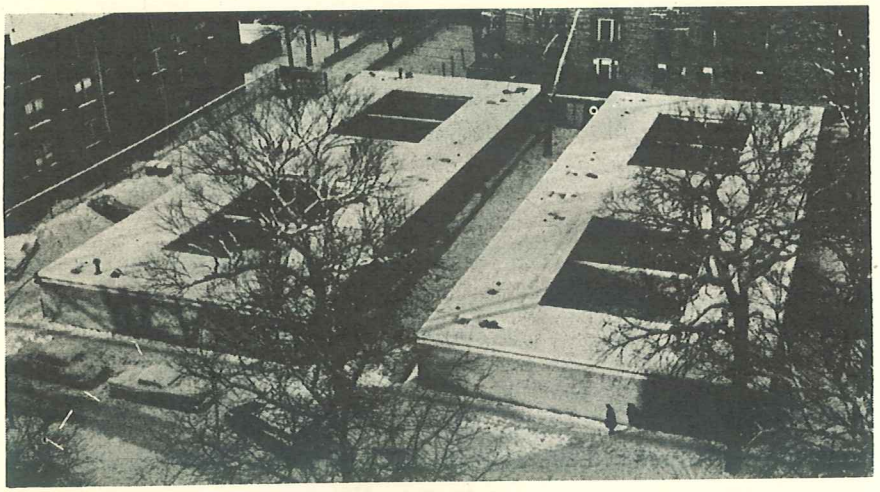
WILLIAMS: Yes, off Washington Street — Gene Asbury did that.

G.B.: That seemed to me like the disappearing house.

WILLIAMS: It's the same idea but that's the house as an object even though it disappears. It contrasts with this one which is a house as a space. Our Western tradition is more or less that of a house as an object, from northwestern Europe. The house is an object in the landscape. So it is in the Orient too. People say this is a Japanese house. I say, no it isn't. Not at all. It is a Mediterranean concept of a house as a space, like Pompeii or a villa in which a house doesn't exist as a separate object, such as a villa way out in the country. In the city, in an urban situation, it is a party wall situation, a town house situation. This is a one story town house. That's another reason why I wanted to make it non-architecture on the outside because I didn't want it to read as an object. It could read as an object if you didn't have trees and plantings and so on. It would be just a big green box.

G.B.: (Who had to have the last word) The last time I was here the trees weren't grown yet and you had grass trying to start in the front and it was still an object. Today we looked carefully for house numbers but were past the corner before we found it.

"Atrium Houses", Chicago—by Yau Chun Wong — Arthur Siegel



"Atrium Houses", exterior — Arthur Siegel

Carl Sandburg Apartments, Chicago, a large scale renewal project — Metro News Photo

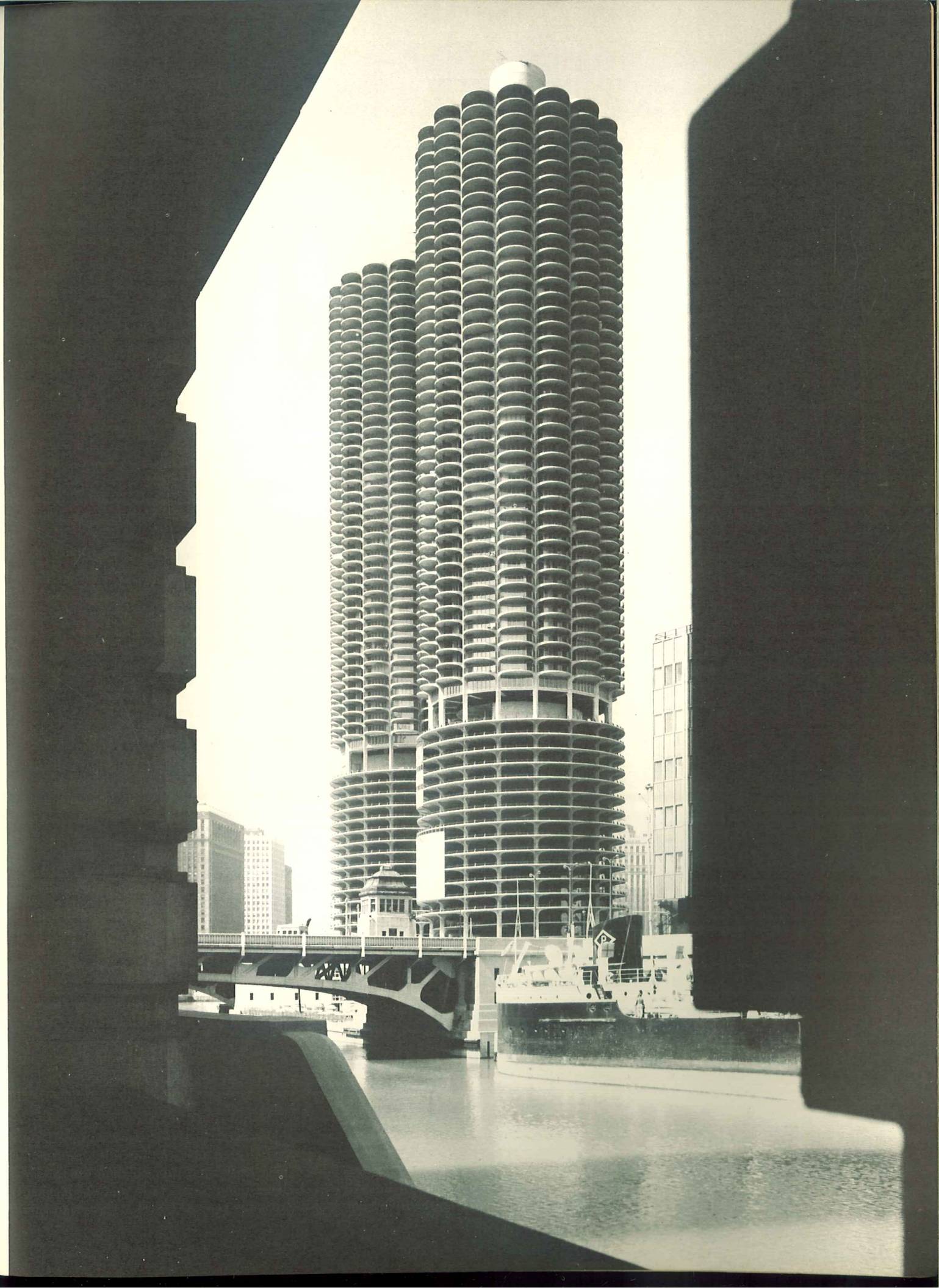
Right:

Marina City, apartment towers, Chicago

Architect: Bertrand Goldberg Associates

Owner: Building Service Employees International Union, Wiliam L. McFetridge, President

Photo: Hedrich-Blessing



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